Philipps Universität Marburg

TRANSKULTURELLE ASPEKTE DER PSYCHOTHERAPIE

PSYCHOTHERAPIEMOTIVATION UND DIE ERFASSUNG VON DEPRESSIVITÄT BEI PATIENTEN MIT MIGRATIONSHINTERGRUND

Dissertation
zur Erlangung des Doktorgrades der Naturwissenschaften
(Dr. rer. nat.)

dem Fachbereich Psychologie der Philipps-Universität Marburg
vorgelegt von

Dipl.-Psych. Hanna Reich de Paredes
(geb. Reich)
*08.03.1986, Duisburg

Marburg an der Lahn, Dezember 2015

Vom Fachbereich Psychologie der Philipps-Universität Marburg (Hochschulkennziffer 1080) als Dissertation angenommen am 22.02.2016.

Erstgutachter: Prof. Dr. Winfried Rief

Zweitgutachterin: Dr. Dr. Ricarda Nater-Mewes

Tag der mündlichen Prüfung / Disputation: 22.02.2016

INHALTSVERZEICHNIS

ABBILDUNGSVERZEICHNIS

1 ZUSAMMENFASSUNG UND ABSTRACT

1.1 ZUSAMMENFASSUNG

Die vorliegende Dissertation beschäftigt sich mit Fragestellungen der transkulturellen klinischen Psychologie. Zu den Bereichen messtheoretische Grundlagen, kulturvergleichende Studien sowie psychische Gesundheit von Migranten wird jeweils eine Studie durchgeführt. Alle Studien fokussieren auf türkische Migranten, die in Deutschland mit 17,6% aller Migranten die größte ethnische Minderheit darstellen.

Die erste Studie beschäftigt sich mit der kultur- und sprachübergreifenden Vergleichbarkeit des PHQ-9, einer der weltweit am häufigsten verwendeten Depressionsfragebögen. Mit Hilfe von Modellen der *Item Response Theory* wird überprüft, ob die Werte der deutschen und türkischen Versionen des PHQ-9 zwischen türkischen Migranten und Menschen ohne Migrationshintergrund vergleichbar sind. Zu diesem Zwecke werden Daten aus vorhergehenden Untersuchungen zusammengeführt und reanalysiert. Die Analysen zeigen, dass zwar Gruppenunterschiede in der Funktionsweise einzelner Items bestehen, dass diese aber keinen bedeutsamen Einfluss auf Skalenebene haben. Folglich sind die Summenwerte des PHQ-9 zwischen türkischen Migranten und Menschen ohne Migrationshintergrund voll vergleichbar – unabhängig davon, ob die türkische oder die deutsche Version des PHQ-9 verwendet wird.

Die zweite und dritte Studie befassen sich mit dem Thema Psychotherapiemotivation. Dies ist von besonderer Bedeutung, da in der psychotherapeutischen Behandlung von Patienten mit türkischem Migrationshintergrund wiederholt von Schwierigkeiten berichtet wurde. Folglich werden diese Studien an klinischen Stichproben von Patienten in stationärer Behandlung mit einer vorrangigen depressiven, somatoformen, Angst- oder Anpassungsstörung durchgeführt. Studie II untersucht Psychotherapiemotivation und Krankheitsüberzeugungen im Vergleich zwischen Patienten mit türkischem Migrationshintergrund und Patienten ohne Migrationshintergrund. Die Ergebnisse zeigen, dass Psychotherapiemotivation und internale Kontrollüberzeugungen bei türkischen Migranten geringer ausgeprägt sind, während fatalistisch-externale Kontrollüberzeugungen sowie der Glaube an fatalistische und übernatürliche Krankheitsursachen stärker ausgeprägt sind als in der Vergleichsgruppe. Auf diese Befunde aufbauend wird in einer dritten Studie

eine kulturell angepasste Intervention entwickelt, die die Psychotherapiemotivation von Patienten mit türkischem Migrationshintergrund zu Beginn der Behandlung steigern soll. Die Intervention nutzt Prinzipien des *Motivational Interviewing* und des *Ethnographic Interviewing* und setzt diese web-basiert um. In einer randomisiert-kontrollierten Pilotstudie werden Akzeptanz, Machbarkeit und Nützlichkeit der Intervention bei Patienten mit türkischem Migrationshintergrund untersucht. Im Vergleich mit der Kontrollbedingung (web-basierte progressive Muskelentspannung) erhält die motivationssteigernde Intervention eine positivere Gesamtbewertung und die Patienten geben an, sich besser auf die Therapie vorbereitet zu fühlen. Bei den Patienten, die mit der motivationssteigernden Intervention arbeiten, steigt im Prä-Post-Vergleich die Selbstwirksamkeit an, während gleichzeitig ein Rückgang external-fatalistischer Kontrollüberzeugungen zu beobachten ist.

Die vorliegende Dissertation liefert durch methodisch vielfältige Studien einige neue Erkenntnisse zu transkulturellen Aspekten der klinischen Psychologie. Besonders wichtig sind dabei der Beitrag zur interkulturellen Validierung des PHQ-9 sowie vielversprechende Ansätze zur Steigerung der Psychotherapiemotivation türkischer Migranten.

1.2 ABSTRACT

The present dissertation focuses on issues of transcultural clinical psychology and comprises three separate studies. There is one study on measurement methodological basics, one cultural comparison study and one study regarding migrant and minority health. All studies focus on Turkish immigrants, which represent the largest ethnic minority in Germany (17.6% of all immigrants).

The first study investigates the cross-cultural and cross-linguistic comparability of the PHQ-9, one of the most frequently used screening questionnaires on depression worldwide. Item Response Theory-models are used to examine whether the German and Turkish versions of the PHQ-9 are comparable between Turkish immigrants and Germans without a migration background. For this purpose, data from previous studies is collected and reanalyzed. The analyses show that there are some differences in item functioning between groups. However, these differences do not have a significant influence on scale level. Hence, PHQ-9 sum scores can be compared between Turkish immigrants and Germans without a migration background without any adjustments, regardless of whether they complete the German or the Turkish version.

The second and third study are concerned with motivation for psychotherapy. Since there have been complaints about difficulties in the psychotherapeutic treatment of patients with a Turkish migration background, this is an especially relevant topic. Consequently, these studies are conducted with clinical samples of inpatients with a primary depressive, somatoform, anxiety, or adjustment disorder. Study II is a cultural comparison study examining differences in motivation for psychotherapy and illness beliefs between inpatients with a Turkish migration background and inpatients without a migration background. The results show that motivation for psychotherapy and internal control beliefs are lower in Turkish immigrant inpatients than in the control group, while external-fatalistic control beliefs and fatalistic and supernatural illness attributions are higher in Turkish immigrant inpatients compared to the control group. Based on these findings, the third study aims at the development of a culturally adapted intervention to engage Turkish immigrant inpatients in psychotherapy at the beginning of treatment. The intervention is web-based and applies principles of Motivational Interviewing and Ethnographic Interviewing. A pilot RCT assesses feasibility and usefulness of the engagement intervention in Turkish immigrant inpatients. The engagement intervention is rated better than the control condition (web-based progressive muscle-relaxation). In particular, participants feel better prepared for therapy after working with the engagement intervention. By working with the engagement intervention, self-efficacy increases and external-fatalistic control beliefs diminish.

By using methodologically diverse studies, the present work contributes novel findings to transcultural clinical psychology as it offers an intercultural validation of the German and Turkish versions of the PHQ-9, and presents first encouraging results regarding the feasibility and usefulness of a culturally adapted engagement intervention.

2 THEORETISCHER HINTERGRUND

Innerhalb der klinischen Psychologie beschäftigt sich das Feld der transkulturellen klinischen Psychologie damit, wie Psychopathologie und psychotherapeutische Behandlung durch kulturelles Wissen und kulturelle Praxis beeinflusst werden. Kulturelle Unterschiede zwischen Individuen und Gruppen stehen in Verbindung mit Krankheitserleben und -verhalten (Kirmayer & Ban, 2013). Kenntnisse über diese Unterschiede sind von zentraler Bedeutung, um eine angemessene Gesundheitsversorgung anbieten zu können (Alegria, Atkins, Farmer, Slaton, & Stelk, 2010), aber auch um basale und allgemeingültige Prozesse zu erkennen, die psychischer Gesundheit und Krankheit zugrunde liegen (Gone & Kirmayer, 2010). Im Zuge der Globalisierung und dem damit zusammenhängenden Anstieg von Migration und kultureller Vielfalt nehmen diese Themen einen immer wichtigeren Stellenwert innerhalb der klinischen Psychologie ein. Dabei beeinflusst die Art und Weise, wie Kultur konzeptualisiert wird, deren Zugänglichkeit für die wissenschaftliche Forschung. Nachdem früher die Begriffe *Kultur* und *kulturelle Gruppe* nahezu synonym verwendet wurden, definiert man Kultur heute im Hinblick auf Werte, Überzeugungen und Praktiken, die mit einer kulturellen Gruppe assoziiert sind (Betancourt & Lopez, 1993), und gelangt so zu einem differenzierten Verständnis und einer besseren Erforschbarkeit von Kultur:

> *„Culture is […] a more or less coherent system of shared meanings, institutions and practices (i.e. beliefs, attitudes and values). […] Culture is a repository of meaningful symbols that structure experience both implicitly and through explicit models. These models are deployed through active processes of signification, meaning-making and self-fashioning by specific actors in concrete situations."*
>
> (Kirmayer & Ban, 2013, p. 98)

Die aktuelle Forschung im Bereich transkulturelle klinische Psychologie verfolgt zwei große thematische Schwerpunkte (Wintrob, 2013): Zum einen *cross-cultural comparisons*, wobei Inzidenz- und Prävalenzraten für psychische Störungen weltweit bestimmt und verglichen werden und kulturelle Vergleiche hinsichtlich weiterer krankheitsrelevanter Variablen (z.B. Krankheitskonzepte) angestellt werden. Der andere Forschungs- und Interessensschwerpunkt ist *migrant and minority health*, bei dem die Untersuchung von psychischen Störungen und Prozessen von Erkrankung und Genesung bei Migranten im Fokus steht.

Über diese inhaltlichen Fragestellungen hinaus wirft die Beschäftigung mit transkulturellen Fragestellungen auch einige methodische Grundfragen auf, die im Themenfeld der transkulturellen klinischen Psychologie einen wichtigen Stellenwert einnehmen (Baas et al., 2011). Hierbei geht es z.B. um die Etablierung von Messäquivalenz. Dies betrifft die Frage, ob verschiedene Versionen eines Fragebogens vergleichbar sind bzw. ob ein Fragebogen bei unterschiedlichen Gruppen in gleicher Art und Weise funktioniert. Hiervon hängt ab, ob Fragebogenwerte zwischen linguistischen und kulturellen Gruppen tatsächlich verglichen werden können. Diese methodischen Fragestellungen bieten die Basis für die zuvor angeführten Forschungsschwerpunkte. Abbildung 1 gibt einen Überblick über das Feld der transkulturellen klinischen Psychologie.

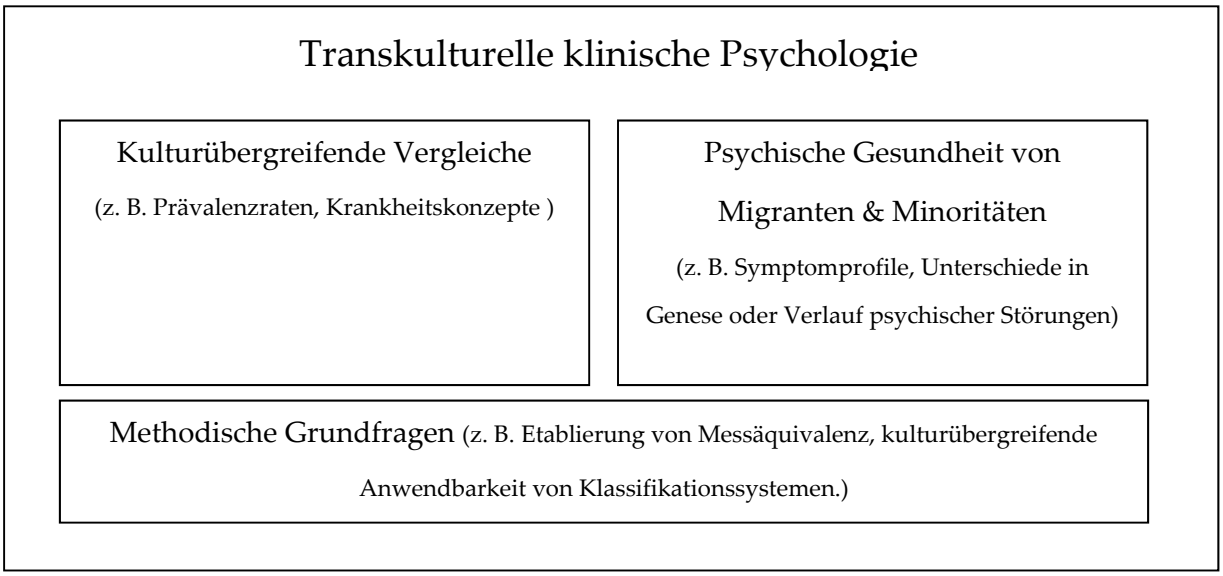


Abbildung 1: Transkulturelle klinische Psychologie im Überblick

Innerhalb der dargestellten Bereiche sind es v.a. folgende Themen, die aktuell vermehrt beforscht werden (Kirmayer & Ban, 2013): Kulturelle Variationen im Krankheitserleben und im Krankheitsausdruck (*languages of distress*), die Rolle von Kognitionen und Emotionen, kulturelle Ausgestaltungen des Selbst und der Persönlichkeit, Konzepte von psychischen Störungen und Wissen über psychische Erkrankungen und deren Behandlung (*mental health literacy*), sowie ökosoziale Gesundheitsmodelle und kulturbasierte Interventionen.

Die vorliegende Dissertation untersucht verschiedene Aspekte der transkulturellen klinischen Psychologie in Deutschland und konzentriert sich dabei auf die Versorgung von Patienten mit Migrationshintergrund. Zu diesem Zwecke erfolgt zunächst eine Fokussierung auf grundlegende, methodische Fragestellungen, welche die Erfassung von Depressivität im

interkulturellen Kontext und die Etablierung von Messäquivalenz betreffen. Im Anschluss daran wird je eine Arbeit aus den Bereichen *cross-cultural comparisons* und *migrant and minority health* vorgestellt, die sich mit der Psychotherapiemotivation von Patienten mit Migrationshintergrund befassen. Die Fragestellungen beziehen sich dabei auf die Themen kulturelle Variationen im Krankheitserleben sowie kulturbasierte Interventionen. Bevor die Hintergründe zu den zuvor vorgestellten Themen präsentiert werden, soll jedoch zunächst ein Überblick über Patienten mit Migrationshintergrund in Deutschland gegeben werden.

2.1 PATIENTEN MIT MIGRATIONSHINTERGRUND IN DEUTSCHLAND

Etwa ein Fünftel der deutschen Bevölkerung hat einen Migrationshintergrund (Statistisches Bundesamt, 2014). Nach der Definition von Schenk und Kollegen (2006) bedeutet dies, dass ein oder beide Elternteile im Ausland geboren wurden. Die wichtigsten Herkunftsländer sind die Türkei (17,6%), Polen (9,6%), Russland (7,5%), Kasachstan (5,7%) und Italien (4,9%). Migranten türkischer Herkunft stellen damit die größte Gruppe dar und sollen konsequenterweise in der vorliegenden Dissertation fokussiert untersucht werden. Sie sind laut dem Berlin Institut für Bevölkerung und Entwicklung die am wenigsten integrierte Minorität in Deutschland, was sich an einem hohen Anteil von Personen mit niedriger Bildung, hohe Raten von Arbeitslosen und Hausfrauen, sowie vielen Personen, die von staatlichen Leistungen abhängig seien, zeige (Woellert, Kröhnert, Sippel, & Klingholz, 2009).

Viele türkische Migranten kamen in den 60er und 70er Jahren im Rahmen des Anwerbeabkommens zwischen der Bundesrepublik und der Türkei als so genannte „Gastarbeiter“ nach Deutschland. Nach der Aufkündigung des Anwerbeabkommens hielt die Zuwanderung türkischer Migranten durch Familiennachzüge weiter an (Woellert et al., 2009). Bei Personen, die selbst migriert sind, spricht man von Migranten erster Generation, und bei Personen, deren Eltern / Großeltern nach Deutschland migriert sind, die selbst aber bereits in Deutschland geboren sind, von Migranten zweiter bzw. dritter Generation.

Migration ist ein zentrales Lebensereignis, das zu psychischen Belastungen führen kann, und gilt als ein wichtiger Risikofaktor für psychische Erkrankungen (Bhugra, 2004). Die psychische Gesundheit von Migranten ist oft stärker beeinträchtigt als die der Allgemeinbevölkerung. Eine Metaanalyse zur psychischen Gesundheit von Migranten in Europa zeigt, dass die Prävalenzraten von depressiven und Angststörungen bei Migranten erhöht sind (Lindert, Ehrenstein, Priebe, Mielck, & Brähler, 2009). In Deutschland zeigt sich

bei türkischen Migranten eine höhere Ausprägung depressiver und somatoformer Symptome (Sariaslan, Morawa, & Erim, 2014) und auch in der Niederlanden lässt sich bei türkischen Migranten eine höhere 1-Monats-Prävalenz für depressive und Angststörungen beobachten (de Wit et al., 2008).

Die psychotherapeutische Behandlung von Migranten wird häufig als „komplex" bezeichnet (Priebe et al., 2011; Schmeling-Kludas, Fröschlin, & Boll-Klatt, 2003). Türkische Migranten in stationärer Behandlung in Deutschland erreichen schlechtere Behandlungsergebnisse als deutsche Vergleichsgruppen (Göbber, Pfeiffer, Winkler, Kobelt, & Petermann, 2010; Mösko, Schneider, Koch, & Schulz, 2008) und in einigen Bereichen können keine nachweisbaren Verbesserungen erzielt werden (Mösko et al., 2008). In der psychotherapeutischen Behandlung von Migranten werden unterschiedliche Schwierigkeiten beschrieben: sozio-ökonomische Stressoren wie niedrige Bildung und Arbeitslosigkeit (Mösko et al., 2008; Priebe et al., 2011), Verständigungsschwierigkeiten (Giese, Uyar, Uslucan, Becker, & Henning, 2013; Priebe et al., 2011) und ein später Behandlungsbeginn, wenn Symptome bereits schwerwiegend oder chronifiziert sind (Melfi, Croghan, Hanna, & Robinson, 2000). Darüber hinaus wurde mehrfach auf eine Inkongruenz konventioneller Psychotherapie mit kulturellen Werten und Weltanschauungen von Migranten hingewiesen (Koch, Hartkamp, Siefen, & Schouler-Ocak, 2008; Mösko et al., 2008; Priebe et al., 2011; Sue, Arredondo, & McDavis, 1992; Wrenn, 1962), was sich in ungünstigen Erwartungen an die Behandlung und die Rollen von Patient und Therapeut (Göbber et al., 2010; Priebe et al., 2011), in einem anderen Verständnis von Krankheit und Behandlung (Priebe et al., 2011) und in Schwierigkeiten mit der Psychotherapiemotivation zeigt (Priebe et al., 2011).

2.2 ERFASSUNG VON DEPRESSIVITÄT IM INTERKULTURELLEN KONTEXT

Depression ist eine sehr weit verbreitete Erkrankung, die mit intensivem Leiden und einer starken Einschränkung der allgemeinen Funktions- und Leistungsfähigkeit verbunden ist (Paykel, Brugha, & Fryers, 2005; Wittchen & Jacobi, 2005). Laut der Welt-Gesundheits-Organisation (WHO) werden in den industrialisierten Ländern depressive Erkrankungen neben den koronaren Herzerkrankungen bis zum Jahr 2020 die weltweit führende Krankheitsursache darstellen (World Health Organization, 2001). Die Lebenszeitprävalenz für Depressionen (*major depressive episode*) schwankt zwischen 3% und 17% (Andrade et al., 2003). Zwischen Ländern und kulturellen Gruppen gibt es zum Teil deutliche Unterschiede

in der Epidemiologie (Ayuso-Mateos et al., 2001; de Wit et al., 2008; González, Tarraf, Whitfield, Vega, & González, 2010; Hasin, Goodwin, Stinson, & Grant, 2005) und dem Symptombild depressiver Erkrankungen (Deisenhammer et al., 2011; Kirmayer & Young, 1998; Zayas & Gulbas, 2012).

In vielen kulturübergreifenden Studien kommen Screening-Fragebögen zum Einsatz, die über den Selbstbericht von Betroffenen die Phänomenologie, Ausprägung und Schwere von Depressionen erfassen. Unter diesen Fragebögen ist das Depressionsmodul des *Patient Health Questionnaire*, der PHQ-9 (Kroenke, Spitzer, & Williams, 2001; Spitzer, Kroenke, & Williams, 1999), ein sehr gut validierter und weltweit sehr häufig eingesetzter Fragebogen zur Erfassung von Depression (Löwe, Kroenke, Herzog, & Gräfe, 2004; Löwe, Unützer, Callahan, Perkins, & Kroenke, 2004; Löwe, Spitzer, et al., 2004). Von der *American Psychiatric Association* wurde der PHQ-9 im DSM-5 als allgemeines Maß der Depressionsschwere empfohlen (American Psychiatric Association, 2013). Der PHQ-9 besteht aus neun Items, wobei jedes Item eins der DSM-IV bzw. DSM-5 Kriterien für eine depressive Episode (Interessensverlust, Niedergeschlagenheit, Schlafprobleme, Energielosigkeit, Appetitveränderungen, Selbstwertprobleme, Konzentrationsprobleme, psychomotorische Veränderungen und Suizidalität) darstellt. Jedes Item kann auf einer Likert-Skala von null („überhaupt nicht“) bis drei („beinahe jeden Tag“) beantwortet werden, entsprechend der Auftretenshäufigkeit des entsprechenden Symptoms in den vergangenen zwei Wochen. Der PHQ-9 wurde in über 70 Sprachen und Dialekte übersetzt und ist online frei verfügbar (Pfizer Inc., 2013).

2.2.1 Etablierung sprach- und kulturübergreifender Vergleichbarkeit

Studien zur sprach- und kulturübergreifenden Vergleichbarkeit der über 70 Versionen des PHQ-9 fehlen bislang zu großen Teilen. Diese Art von Validierung, die Etablierung von Messäquivalenz, ist jedoch das methodische Fundament jeglicher Art von Studien, die z.B. Prävalenzraten und Symptomprofile depressiver Störungen zwischen linguistischen und / oder kulturellen Gruppen vergleichen (Baas et al., 2011). Was unter Messäquivalenz zu verstehen ist und wie diese untersucht werden kann soll im Folgenden dargestellt werden.

Psychologische Tests sind zwei unterschiedlichen Arten von Verzerrungen unterworfen (Drasgow, 1982, 1987): Die erste Form, Messfehler oder interne Verzerrung, tritt beispielsweise auf, wenn Individuen mit gleicher Ausprägung der zu messenden latenten Variablen, die aus verschiedenen Subpopulationen stammen, unterschiedliche erwartete

Testwerte aufweisen. Das bedeutet, die internen Beziehungen des Tests, also die Kovarianzen zwischen den Itemantworten, unterscheiden sich zwischen zwei oder mehr Gruppen von Probanden. Eine andere Art von Verzerrungen sind relationale / externe Verzerrungen, die bezüglich einer zweiten Variable bestehen können. Dies kann z.B. bedeuten, dass sich bivariate Zusammenhänge mit den nicht mit dem Test gemessenen Variablen zwischen Gruppen unterscheiden. Relationale / externe Verzerrungen resultieren in Unterschieden in der prädiktiven Validität eines Tests (Embretson & Reise, 2013). Die vorliegende Arbeit konzentriert sich auf die Überprüfung interner Verzerrungen, die möglicherweise zwischen linguistischen und / oder kulturellen Gruppen bestehen. Liegen diese nicht vor, bezeichnet man einen Fragebogen als messäquivalent oder messinvariant. Ist mit der Etablierung von Messäquivalenz in einem ersten Schritt sichergestellt, dass dem Fragebogen in seinen verschiedenen Versionen oder bei seinem Einsatz in verschiedenen Gruppen keine internen Verzerrungen / Messfehler inhärent sind, können in weiteren Studien relationale / externe Verzerrungen untersucht werden.

Interne Verzerrungen betreffen die Messinvarianz einer Skala auf Itemebene und sind von grundlegender Bedeutung in der psychometrischen Forschung. Damit Testwerte (entweder beobachtete Summenwerte oder Schätzer der latenten Variable) zwischen Gruppen vergleichbar sind, müssen sich diese Werte auf der gleichen zugrunde liegenden Skala befinden (Embretson & Reise, 2013) und es muss überprüft werden, ob die Items eines Fragebogens die gleiche Funktionsweise in verschiedenen Gruppen haben. Die Wahrscheinlichkeit, einem Item zuzustimmen, sollte für alle Individuen mit einer bestimmten Ausprägung der Messvariable (z.B. Depressivität) gleich sein. Das heißt, sie sollte nicht durch die Zugehörigkeit zu einer linguistischen oder kulturellen Gruppe beeinflusst sein. Wenn diese Voraussetzung nicht erfüllt ist, spricht man davon, dass *Differential Item Functioning* (DIF) (Camilli & Shepard, 1994; Holland & Wainer, 1993) vorliegt. DIF tritt auf, wenn ein Testitem über zwei oder mehrere Gruppen hinweg nicht in derselben Beziehung zur latenten Variable steht. Die Abwesenheit von DIF legitimiert sprach- und kulturübergreifende Vergleiche basierend auf dem Summenwert als Indikator der latenten Variable und erlaubt den Rückschluss aus beobachteten Unterschieden in den Summenwerten auf tatsächliche Unterschiede zwischen den Gruppen.

Zur angemessenen Erfassung und Beurteilung von DIF sind Modelle der *Item Response Theory* (IRT) besonders geeignet (Adler, Hetta, Isacsson, & Brodin, 2012; Reise & Waller, 2009). Die IRT, die seit den 1960er Jahren entwickelt wurde, bietet parametrische und non-parametrische Modelle, welche leistungsstarke Werkzeuge darstellen, um Messfehler von wahren Gruppenunterschieden zu trennen (Meijer & Baneke, 2004; Waller, Thompson, & Wenk, 2000). Während sowohl die klassische Testtheorie (KTT) als auch die IRT von der Annahme einer latenten Dimension ausgehen (z.B. Depressivität), bestehen entscheidende Unterschiede in den Grundannahmen beider Theorien. Die KTT setzt bei Testrohwerten, d.h. Summenwerten an, die sich aus dem *wahren Wert* und einer zufälligen Fehlerkomponente zusammen setzen. Beobachtbares Verhalten (d.h. der erzielte Summenwert) wird dabei mit der „Messung" der latenten Dimension gleichgesetzt. Die IRT setzt hingegen bei Einzelwerten an, d.h. bei Antworten auf einzelne Items eines Fragebogens. Beobachtbares Verhalten (d.h. die Antwort auf ein Item) wird in der IRT als ein *Indikator* für die latente Dimension verstanden. Die Wahrscheinlichkeit, ein bestimmtes Item mit einer bestimmten Ausprägung der latenten Variable zu lösen, wird durch mathematische Modelle spezifiziert und ist somit der empirischen Überprüfung zugänglich: Die IRT ermöglicht es, Lösungswahrscheinlichkeiten für einzelne Items und Antwortoptionen einzelner Items zwischen verschiedenen Gruppen (z.B. linguistischen oder kulturellen Gruppen) zu vergleichen. Sie bietet damit einen hervorragenden Zugang zur Überprüfung der Messäquivalenz psychologischer Tests, bei der es von Interesse ist, Unterschiede in der funktionsweise jedes einzelnen Items und seiner Antwortoptionen zwischen verschiedenen Gruppen (= DIF) zu analysieren und zu verstehen.

2.2.2 Sprach- und kulturübergreifende Vergleichbarkeit des PHQ-9

Es gibt bislang nur wenige Studien, die der Vergleichbarkeit verschiedener Sprachversionen des PHQ-9 gewidmet sind. Huang und Kollegen (2006) veröffentlichten die erste Studie zu diesem Thema und reanalysierten Daten von über 5.000 hausärztlichen Patienten in den USA. Hierbei verglichen Sie die englische, spanische und chinesische Sprachversion des PHQ-9. Bezüglich der Funktionsweise der Items fanden sie Unterschiede zwischen der englischen und chinesischen Version in den Items zu Schlaf, Appetit und psychomotorischen Veränderungen, sowie Unterschiede zwischen der englischen und der spanischen Version in den Items zu Schlaf, Appetit, Interessensverlust und Selbstwert. In einer kanadischen Studie

(Arthurs, Steele, Hudson, Baron, & Thombs, 2012) wurden Unterschiede zwischen der englischen und französischen Version in den Items zu Schlaf, Interessensverlust und Selbstwert bei Patienten mit systemischer Sklerose gefunden. In einem Vergleich der deutschen und russischen Version (Hirsch, Donner-Banzhoff, & Bachmann, 2013) wurden in einer Stichprobe von Hausarztpatienten Unterschiede im Item zu Schlafproblemen festgestellt.

Bezüglich der Vergleichbarkeit des PHQ-9 zwischen kulturellen Gruppen konnten zwei Studien die Vergleichbarkeit der englischen Version zwischen afro-amerikanischen und kaukasischen Hausarztpatienten in den USA bestätigen (Hepner, Morales, Hays, Edelen, & Miranda, 2008; Huang et al., 2006). Eine Studie an einer Stichprobe der Allgemeinbevölkerungs belegte die Vergleichbarkeit der deutschen Version zwischen Deutschen ohne Migrationshintergrund und einer heterogenen Gruppe von Migranten in Deutschland (Mewes et al., 2010). Andererseits fanden Crane und Kollegen (2010) beim Einsatz der englischen Version in den USA Unterschiede in den Items zu Schlaf, Energielosigkeit und psychomotorischen Veränderungen zwischen HIV-infizierten Afro-Amerikanern und Weißen. Weiterhin wurde bei männlichen Hausarztpatienten in den Niederlanden ein Unterschied zwischen gebürtigen Niederländern und Niederländern aus Suriname im Item psychomotorische Veränderungen gefunden (Baas et al., 2011).

Auch wenn in den vorgestellten Studien Unterschiede in der Funktionsweise einzelner Items zwischen linguistischen oder kulturellen Gruppen bestehen, bestätigten sie doch einstimmig, dass die Summenwerte des PHQ-9 zwischen den beschriebenen Gruppen vergleichbar sind. Die Unterschiede in der Funktionsweise der Items hatten – wenn überhaupt – nur einen minimalen Einfluss auf Skalenebene. Die Ursachen für die Unterschiede in der Funktionsweise der Items blieben jedoch zumeist unklar. Darüber hinaus sind zahlreiche linguistische und kulturelle Gruppen bzgl. der Vergleichbarkeit ihrer Werte im PHQ-9 noch nicht untersucht, u.a. fehlen Befunde zu der türkischen Sprachversion und zu türkischen Migranten.

Nachdem nun einige methodische Grundfragen der transkulturellen klinischen Psychologie behandelt wurden, soll es im folgenden Abschnitt zu Psychotherapiemotivation um einen Themenkomplex gehen, der in der psychotherapeutischen Behandlung von Patienten mit Migrationshintergrund oft als problematisch beschrieben wird.

2.3 PSYCHOTHERAPIEMOTIVATION

Zunächst ist es wichtig, ein grundlegendes Verständnis für Motivation und damit zusammenhängende Variablen zu etablieren. Schon der Philosoph Arthur Schopenhauer charakterisierte die zugrunde liegende Bedeutung des Wortes Motivation (von lat. movere – bewegen) als *„zu einer Handlung bewegt zu sein"* (Schopenhauer, 1839 / 1972). Motivation wird in den meisten Definitionen als internale Kraft verstanden, die einen Organismus dazu bewegt, ein bestimmtes Verhalten auszuführen (Kleinginna & Kleinginna, 1981). Der Term Psychotherapiemotivation kann sich nun sowohl auf das Verhalten beziehen, das notwendig ist, um eine psychotherapeutische Behandlung zu beginnen, als auch auf die Motivation, sich in einer bestehenden Behandlung zu engagieren (Drieschner, Lammers, & van der Staak, 2004). Im Kontext von Psychotherapie ist es dabei von besonderer Bedeutung, zwischen einem Wunsch (z.B. „ich möchte, dass es mir besser geht", „ich will nicht mehr depressiv sein") und der Motivation, ein bestimmtes Verhalten auszuführen, zu unterscheiden. Auch wenn Motivation auf einem Wunsch basieren kann, resultiert sie nicht zwingend aus diesem.

Der Patient ist in der Psychotherapie nicht bloß Empfänger einer Behandlung, sondern er muss sich aktiv an dieser beteiligen. Daraus lässt sich schließen, dass die Motivation des Patienten, sich in der Psychotherapie zu beteiligen, ein wesentlicher Faktor für das Ergebnis der Behandlung ist (Krause, 1966). Die Wichtigkeit der Psychotherapiemotivation bezieht sich vor allem auf die angenommene enge Beziehung zu behandlungsrelevantem Verhalten (Blum, 1988; Drieschner et al., 2004). In einer häufig zitierten Definition schreiben Miller und Rollnick (1991, p. 19): "*Motivation can be defined as the probability that a person will enter into, continue, and adhere to a specific change strategy.*" Auch wenn diese direkte Kopplung von Motivation an Verhalten vielversprechend erscheint, ist die Definition von Miller und Rollnick (1991) zirkulär. Motivation kann nicht aus dem Verhalten erschlossen werden, von dem angenommen wird, dass sie es voraussagt:

> *"Intention cannot be inferred from actions; otherwise, it would provide a circular explanation in which the same event is taken as evidence of both cause and effect. Rather, intention must be defined independently of the behavior it regulates.''*
>
> (Bandura, 1986, p. 468)

Es ist von entscheidender Bedeutung, zwischen der Prädiktorvariable *Motivation* und der Kriteriumsvariable *Verhalten* präzise zu unterscheiden. Motivation ist ein Prädiktor für das

Verhalten von Patienten in und außerhalb der Sitzung. Sie beeinflusst damit auch den psychotherapeutischen Prozess (Keithly, Samples, & Strupp, 1980), da sie z.B. ausschlaggebend für die Wahl der Interventionen ist (Drieschner et al., 2004). Zusammenhänge zwischen Motivation und dem Ergebnis einer Psychotherapie konnten in korrelativen und prospektiven Studien nachgewiesen werden (Nickel et al., 2006; Schneider & Klauer, 2001; Sifneos, 1978). Fehlende Psychotherapiemotivation ist dagegen einer der am meisten zitierten Gründe für negative Behandlungsergebnisse wie fehlendes Einhalten von Absprachen, Dropout oder Rückfälle (Klauer, Maibaum, & Schneider, 2007; Ryan, Plant, & O'Malley, 1995). Trotzdem kann nur ein mäßiger Zusammenhang zwischen Psychotherapiemotivation, behandlungsrelevantem Verhalten und Behandlungsergebnis erwartet werden, da zum einen z.B. kognitive oder neuropsychologische Einschränkungen in der willentlichen Kontrolle vorliegen können, so dass dem Patienten die Fähigkeit fehlt, das zu tun, was der Behandlungsansatz erfordert (Drieschner et al., 2004). Zum anderen ist das Behandlungsergebnis auch davon abhängig, wie effektiv der Behandlungsansatz an sich ist und wie anhaltend das Problem des Patienten ist (ebd.).

Psychotherapiemotivation ist als Zustand („*state*") und nicht als Eigenschaft („*trait*") eines Patienten zu verstehen (Miller, 1985). Das bedeutet, dass die Psychotherapiemotivation während des Therapieprozesses fluktuiert und beeinflusst werden kann. Dieses Verständnis ist für Therapeuten / Behandler besonders wichtig, um selbsterfüllende Prophezeiungen (z.B. den Patienten beschuldigen, unmotiviert zu sein, und als Therapeut nur halbherzige Versuche unternehmen, die Psychotherapiemotivation zu steigern) zu vermeiden (edb.). Es gibt zahlreiche Ansätze, wie die Psychotherapiemotivation positiv beeinflusst werden kann (Kear-Colwell & Pollock, 1997; Larke, 1985; Meichenbaum & Turk, 1987; Miller & Rollnick, 1991; Murphy & Baxter, 1997; Newman, 1994; Reis & Brown, 1999; Smyth, 1996; Walitzer, Dermen, & Connors, 1999). Viele davon stammen ursprünglich aus der Arbeit mit Suchtpatienten oder Straftätern, werden aber auch bei anderen Patientengruppen erfolgreich angewendet.

2.3.1 Einflussfaktoren auf Psychotherapiemotivation

Für die Vorhersage von Psychotherapiemotivation ist das Verständnis ihrer Prädiktoren zentral. Es gibt zahlreiche Faktoren, die die Psychotherapiemotivation einer Person beeinflussen. Ajzen schrieb im Kontext seiner Theorie des geplanten Verhaltens:

> *"Since we are interested in* understanding *human behavior, not merely in predicting it, we must try to identify the determinants of behavioral intentions"*
>
> (Ajzen, 1988, p.117)

Dieses Verständnis ist vor allem wichtig, um Interventionen zur Steigerung von Psychotherapiemotivation zu planen. Einige zentrale Modelle, die Psychotherapiemotivation zu erklären versuchen, sollen nun vorgestellt und diskutiert werden.

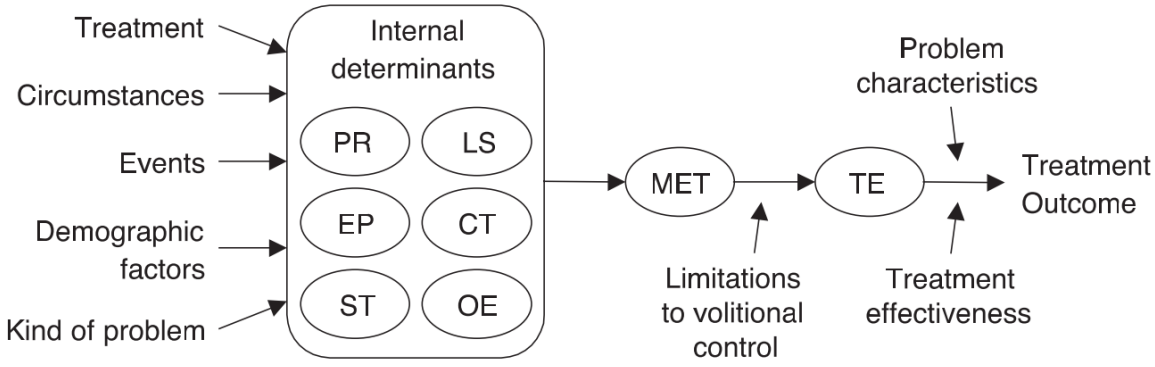
Verschiedene Motivationstheorien basieren auf Erwartungs-mal-Wert-Modellen, die in ihrer ersten Form bereits in den 1950er Jahren beschrieben wurden (Atkinson, 1957). Zwei Beispiele für diese Form von Modellen sollen hier kurz skizziert werden. Das *Health Belief Model* (Rosenstock, 1965; Rosenstock, Strecher, & Becker, 1988) nutzt die Variablen wahrgenommene Bedrohung (wird beeinflusst von wahrgenommener Anfälligkeit und wahrgenommenem Schweregrad), wahrgenommene Barrieren und wahrgenommener Nutzen, Selbstwirksamkeit, sowie Verhaltensanreize, um gesundheitsbezogene Handlungen vorauszusagen. Ajzens *Theory of planned behavior* (1988) nimmt Interaktionen zwischen den Variablen Einstellung zum Verhalten, subjektive Norm und wahrgenommene Verhaltenskontrolle an, welche eine Intention beeinflussen, die wiederum das Verhalten vorhersagt. Ajzen legt seiner Theorie den Gedanken zu Grunde, dass externale Faktoren *nur dann* mit Verhalten zusammenhängen, wenn sie Überzeugungen beeinflussen, die den Determinanten des Verhaltens zu Grunde liegen. Dieser basalen Annahme schließen sich auch andere Autoren an:

> *„Actions or their underlying intentions are always only internally caused''*
>
> (Heckhausen, 1991, p. 407)

Einen anderen Aspekt der Therapiemotivation fokussieren 1982 Prochaska und Di Clemente mit dem *Transtheoretical model of behavior change*, innerhalb dessen die Annahme, dass Individuen während eines Veränderungsprozesses fünf Phasen (*Stages of change)* durchlaufen, eine der einflussreichsten Ideen ist. Die Autoren unterschieden zwischen den drei kognitiven Phasen, Absichtslosigkeit (*precontemplation*), Kontemplation (*contemplation*) und Entschlossenheit (*determination*, in späteren Versionen Vorbereitung / *preparation*, Prochaska, DiClemente, Velicer, & Rossi, 1992), und zwei Verhaltensphasen, Aktion (*action*) und Erhaltung (*maintenance*). Auch wenn dieses Modell in Wissenschaft und Praxis häufig Anwendung findet, bestehen einige Unzulänglichkeiten, wenn Psychotherapiemotivation

hierdurch operationalisiert werden soll. Die implizit angenommene Mehrdimensionalität hat zur Folge, dass durch das Modell verschiedene Ausprägungen von Therapiemotivation nicht auf einer Skala abgebildet werden können, und es werden nur begrenzt relevante motivationale Faktoren eingeschlossen (Drieschner et al., 2004). Ferner ist dem Modell die zeitliche Dimension einer bestimmten Abfolge von Stufen inhärent, deren prädiktiver Wert empirisch bislang immer noch fraglich ist (Schwarzer, 2008; Sutton, 2001).

Drieschner und Kollegen fassen 2004 in ihrer Konzeptualisierung von Behandlungsmotivation zentrale Variablen und Vorstellungen der präsentierten Modelle zusammen (siehe Abbildung 2). Sie unterscheiden zwischen externalen Faktoren, internalen Determinanten, der Behandlungsmotivation an sich und dem daraus folgenden Verhalten. Die Ideen von Ajzens und Heckhausens finden sich in dem zentralen Stellenwert der internalen Determinanten wieder. Diese sind sowohl für das Verständnis von Psychotherapiemotivation von hoher Bedeutung, als auch für die Förderung derselben in oder vor der Behandlung. Kulturelle Normen und Werte spielen dabei eine besondere Rolle, da sie Erklärungsmodelle bieten, um Krankheiten zu verstehen (Kirmayer & Sartorius, 2007; Kleinmann, 1980) und somit Einstellungen und Überzeugung zur Krankheit und Gesundheit beeinflussen (Bhugra, 2005). Die *Stages of change* von Prochaska und Di Clementes werden nun in zwei Komponenten aufgeteilt: die kognitiven Phasen fallen unter die internalen Determinanten, während sich die Verhaltensphasen im tatsächlichen *treatment engagement* wiederfinden, das von der Ausprägung der Behandlungsmotivation abhängt, und seinerseits zum Behandlungsergebnis beiträgt.



Abbreviations: PR = Problem Recognition; LS = Level of Suffering; EP = External Pressure; CT = perceived Costs of Treatment; ST = perceived Suitability of Treatment; OE = Outcome Expectancy; MET = Motivation to Engage in Treatment; TE = Treatment Engagement

Abbildung 2: Konzeptualisierung von Behandlungsmotivation nach Drieschner et al. (2004, p. 1131)

Zu den internalen Determinanten von Psychotherapiemotivation werden folgende Konzepte zusammengefasst: Leidensdruck, Ergebniserwartung, Problemerkennung, wahrgenommene Passung der Behandlung, wahrgenommene Kosten der Behandlung und wahrgenommener Druck von außen. Externale Faktoren, die die internalen Determinanten von Psychotherapiemotivation beeinflussen, sind die Behandlung selbst, äußere Umstände wie Ressourcen, soziale Einflüsse, ausgeübter Druck und Ereignisse im Leben des Patienten. Auch allgemeine Patientenmerkmale wie demographische Charakteristika (hierzu zählt neben Alter, Geschlecht, Bildung etc. auch das Vorhandensein eines Migrationshintergrundes) oder die Art des zu behandelnden Problems beeinflussen nur indirekt die Psychotherapiemotivation über den Einfluss, den sie auf die oben genannten internalen Determinanten von Psychotherapiemotivation ausüben.

2.3.2 Psychotherapiemotivation bei Patienten mit türkischem Migrationshintergrund

Bislang gibt es erst wenige Studien zur Psychotherapiemotivation türkischer Migranten. Umso wichtiger ist es, die Befunde zu den verschiedenen internalen Determinanten von Psychotherapiemotivation zu kennen. *Leidensdruck* ist ein Faktor, der traditionell als Determinante von Psychotherapiemotivation angesehen wird (Krause, 1966; Miller, 1985; Raskin, 1961; Schneider & Klauer, 2001). Patienten mit türkischem Migrationshintergrund erreichen in Studien häufig höhere Ausprägungen von Symptomen als die Vergleichsgruppen (Behrens, Machleidt, Haltenhof, Ziegenbein, & Calliess, 2008; Erim, Morawa, Özdemir, & Senf, 2011; Fassaert et al., 2009; Kizilhan, 2008; Mewes & Rief, 2009) und klagen deutlich häufiger über Schmerzen als Patienten ohne Migrationshintergrund (Ferber, Köster, & Celayir-Erdogan, 2003). Türkische Migranten in den Niederlanden geben einen höheren wahrgenommenen Bedarf an psychischer Gesundheitsversorgung als marokkanische Migranten oder Niederländer ohne Migrationshintergrund an, was mit einer höheren Prävalenz verbreiteter psychischer Störungen und stärkeren Ausprägungen von Symptomen bei türkischen Migranten zusammenhängt (Fassaert et al., 2009). Im Gegensatz dazu stehen Studien zur Inanspruchnahme des Gesundheitswesens, die zeigen, dass Patienten mit türkischem Migrationshintergrund wenig Vorerfahrung mit Psychotherapie haben (Glaesmer et al., 2011; Machleidt, Behrens, & Ziegenbein, 2007; Raney & Çınarbas, 2005). Der Faktor *Leidensdruck* für sich genommen genügt folglich nicht, um zu verstehen, wieso türkische Migranten trotz höherer Prävalenzraten bei Depressionen und

Angststörungen (siehe 2.1) in vielen Fällen keine psychotherapeutische Behandlung beginnen.

Weitere, zentrale Determinanten von Psychotherapiemotivation sind die Problemerkennung, die wahrgenommene Passung der Behandlung und die Ergebniserwartung, zwischen denen starke Zusammenhänge bestehen. Bezüglich der *Problemerkennung* liegen bereits einige Studien vor: In Bezug auf die krankheitsbezogenen Kontrollüberzeugungen wurde herausgefunden, dass türkische Migranten in Großbritannien stärker als Briten ohne Migrationshintergrund davon überzeugt sind, dass Gesundheit außerhalb ihrer unmittelbaren Kontrolle liegt (Bowling, 1994). Auch türkische Migrantinnen in Schweden schätzen ihre eigenen Einflussmöglichkeiten auf Heilung und Genesung nach einer Krankheit als gering ein (Bäärnhielm & Ekblad, 2000). Es erscheint nachvollziehbar, dass die Überzeugung, die eigene Krankheit kaum oder gar nicht beeinflussen zu können, die *Ergebniserwartung* an die psychotherapeutische Behandlung und damit auch die Psychotherapiemotivation negativ beeinflussen kann. Ein weiteres Konzept im Bereich *Problemerkennung* bezieht sich auf die kausalen Krankheitsattributionen, die wiederum eng mit der *wahrgenommenen Passung der Behandlung* zusammenhängen. Auch hier sind Unterschiede zwischen Patienten mit türkischem Migrationshintergrund gegenüber Patienten ohne Migrationshintergrund festzustellen: Patienten mit türkischem Migrationshintergrund sind stärker als Patienten ohne Migrationshintergrund davon überzeugt, dass externale, fatalistische oder übernatürliche Faktoren ihre Krankheit verursacht hätten (Franz et al., 2007; Kizilhan, 2008). Andererseits gibt es auch Studien, die zeigen, dass die ländliche Bevölkerung in der Türkei psychologische, soziale und medizinische Erklärungen als Ursachen einer psychischen Erkrankung gegenüber übernatürlichen und mystischen Erklärungen vorzieht (Eskin, 1989) und dass türkische Migranten in Australien öfter an eine natürliche Krankheitsursache glaubten als an eine übernatürliche (Minas, Klimidis, & Tuncer, 2007). Die Ursachenzuschreibungen für psychische Störungen in der türkischen Kultur reichen von traditionellen, übernatürlichen Attributionen bis hin zu biologischen Attributionen (Tuncer, 1995). Somit scheint die Bandbreite an Krankheitszuschreibungen bei türkischen Migranten vielfältiger zu sein als bei Deutschen ohne Migrationshintergrund. Des Weiteren wurde berichtet, dass das Behandlungskonzept von Patienten mit türkischem Migrationshintergrund bei psychosomatischen Beschwerden stärker auf Arzneimittel ausgerichtet ist und deutlich

weniger auf Beratung oder Gespräch. Sie haben größere Arzneimittelerwartungen und eine größere Überzeugung von der Wirksamkeit der Medikamente als Patienten ohne Migrationshintergrund (Ferber et al., 2003). Eine Studie von Callies und Kollegen zeigt, dass in der Allgemeinbevölkerung die Einstellung gegenüber Psychotherapie bei türkischen Migranten zweiter Generation negativer ist als bei Deutschen ohne Migrationshintergrund (Calliess, Schmid-Ott, Akguel, Jaeger, & Ziegenbein, 2007). Auch diese Befunde spielen in Bezug auf die Faktoren *wahrgenommene Passung der Behandlung*, *Ergebniserwartung* und letztlich für die Psychotherapiemotivation einer Person eine wichtige Rolle. Zusammenfassend lässt sich festhalten, dass die Mehrzahl der dargestellten Befunde zu internalen Determinanten von Psychotherapiemotivation eine geringere Ausprägung von Psychotherapiemotivation bei Patienten mit türkischem Migrationshintergrund erwarten lassen.

2.3.3 Veränderung von Psychotherapiemotivation bei Patienten mit Migrationshintergrund

Wie bereits beschrieben ist Psychotherapiemotivation vor und während einer Behandlung veränderbar. Krankheitsüberzeugungen sind dabei wichtige internale Determinanten von Psychotherapiemotivation (Drieschner et al., 2004; Petrie & Weinman, 2012) und damit auch zentrale Ansatzpunkte, um die Psychotherapiemotivation positiv zu beeinflussen. Metaanalysen zeigen, dass kulturell angepasste Psychotherapie effektiver ist als unangepasste, und dass die Integration des subjektiven Krankheitskonzeptes des Patienten den entscheidenden Moderator für ein besseres Behandlungsergebnis darstellt (Benish, Quintana, & Wampold, 2011).

Grundsätzlich ist bei kulturellen Anpassungen zwischen Anpassungen der Oberflächenstruktur und der Tiefenstruktur der Therapie zu unterscheiden (Barrera, Castro, Strycker, & Toobert, 2013; Resnicow, Braithwaite, Ahluwalia, & Baranowski, 1999). Dabei beinhaltet die Oberflächenstruktur beobachtbare Merkmale der Zielpopulation, wie z.B. Sprache und Kleidung. Eine Anpassung der Tiefenstruktur beinhaltet die Einbeziehung kultureller, sozialer, historischer, umweltbezogener und psychologischer Faktoren, die das Gesundheitsverhalten (und damit auch die Psychotherapiemotivation) der Zielgruppe beeinflussen (Resnicow et al., 1999). Während eine angepasste Oberflächenstruktur einer Behandlung (z.B. gleiche kulturelle Herkunft, gleiche Sprache) die Aufnahmebereitschaft des

Patienten erhöht, fördert erst die Anpassung der Tiefenstruktur die Wichtigkeit und Salienz einer Behandlung (ebd.).

Die Integration subjektiver Krankheitsmodelle des Patienten betrifft die Tiefenstruktur einer Therapie. Die Erklärungen des Patienten für seine Krankheit sollten in ein therapeutisches Erklärungsmodell integriert werden (Frank & Frank, 1993; Wampold, 2007). Subjektive Krankheitsmodelle können durch psychologische Interventionen wie das *Motivational Interviewing* verändert werden (Miller & Rollnick, 1991; Petrie & Weinman, 2012; Rollnick, Miller, & Butler, 2008). *Motivational Interviewing* ist ein „direktiver, klientenzentrierter Stil zum Hervorrufen von Verhaltensänderungen, indem Klienten dabei unterstützt werden, Ambivalenzen zu erforschen und zu lösen" (Miller & Rollnick, 1991). Diese Technik ist bei vielen Verhaltensproblemen und Erkrankungen effektiv (Rubak, Sandbæk, Lauritzden, & Christensen, 2005) und bei ethnischen Minderheiten und Migranten besonders hilfreich (Hettema, Steele, & Miller, 2005; Lundahl, Kunz, Brownell, Tollefson, & Burke, 2010). Swartz und Kollegen (2007) schlagen vor, *Motivational Interviewing* mit Elementen des *Ethnographic Interviewing* zu verbinden, um die Mitwirkung des Patienten in der Behandlung zu verbessern. Ethnographic Interviewing fokussiert dabei auf den kulturellen Hintergrund eines Patienten, inklusive seiner Wahrnehmung der Welt, seiner Werte und seines Glaubens (Westby, 1990). Für die praktische Umsetzung bedeutet dies, mit dem Patienten über seine Psychotherapiemotivation und seine individuellen Krankheitskonzepte zu sprechen. Dabei sind offene Fragen das Mittel der Wahl. Das Gesprächsziel ist dabei nicht, den Patienten von etwas (wie z.B. der Notwendigkeit von Veränderung) überzeugen zu wollen, sondern vielmehr Ambivalenzen zu verstehen und deutlich zu machen. Dies beinhaltet auch eine offene Kommunikation über Befürchtungen und Ängste (z.B. Schamgefühle), sowie das Gespräch über Gründe, warum der Patient bislang noch *keine* Veränderung durchgeführt hat (natürliche Widerstände). Ein weiteres, aus dem *Motivational Interviewing* abgeleitetes Ziel in der therapeutischen Kommunikation mit dem Patienten ist die Stärkung der Selbstwirksamkeit des Patienten, d.h. der Überzeugung, aus eigener Kraft etwas für die persönliche Genesung bewirken zu können. Am Beispiel der kausalen Krankheitszuschreibungen kann dies umgesetzt werden, indem übernatürliche Attributionen in ein Erklärungsmodell der Krankheit integriert werden (ohne diese an sich in Frage zu stellen) und gleichzeitig Einflussfaktoren herausgearbeitet werden, die der Patient selbst beeinflussen kann (z.B. Umgang mit Stress bei der Arbeit oder in der Familie).

3 ZIELSETZUNG DES DISSERTATIONSVORHABENS

In dieser Dissertation sollen einige wichtige transkulturelle Aspekte der Psychotherapie näher betrachtet werden. Zu den Themenkomplexen „Erfassung von Depressivität“ und „Psychotherapiemotivation“ werden insgesamt drei Studien durchgeführt. In der vorliegenden Dissertation wird zur Untersuchung der genannten Themenkomplexe die Gruppe der türkischen Migranten betrachtet. Türkische Migranten sind für die transkulturelle klinische Psychologie in Europa eine besonders relevante Gruppe, da sie die größte Minorität in Deutschland darstellen (siehe 2.1) und eine der drei größten Migrantenpopulationen in anderen europäischen Ländern wie den Niederlanden, Dänemark und Österreich sind (Eurostat, 2011).

3.1 ÜBERPRÜFUNG DER INTERKULTURELLEN VERGLEICHBARKEIT DES PHQ-9

In der ersten Studie soll überprüft werden, ob die Werte des PHQ-9, eines der am weitest verbreitetesten Screening-Instrumente zur Erfassung depressiver Symptome, zwischen türkischen Migranten in Deutschland und Deutschen ohne Migrationshintergrund vergleichbar sind. Da die Prävalenzraten affektiver Störungen bei Arbeitsmigranten in Europa erhöht sind (Aichberger et al., 2010; de Wit et al., 2008; Lindert et al., 2009), sind reliable und valide Screening-Instrumente zur Erfassung depressiver Symptome in dieser Gruppe von außerordentlicher Bedeutung.

Es soll zunächst untersucht werden, ob die deutsche und türkische Sprachversion des PHQ-9 (Pfizer Inc., 2013) miteinander vergleichbar sind. Dazu werden Antworten deutsch und türkisch sprechender türkischer Migranten in Deutschland auf die Items des PHQ-9 (deutsche Version vs. türkische Version) verglichen. In einem zweiten Schritt soll geprüft werden, ob die deutsche Version des PHQ-9 zwischen den kulturellen Gruppen der Deutschen ohne Migrationshintergrund und deutsch sprechenden türkischen Migranten in Deutschland vergleichbar ist. Dieser gestufte Ansatz ist notwendig, da beträchtliche Unterschiede im türkischen Sprachgebrauch und den deutschen Sprachkenntnisse innerhalb der Gruppe der türkischen Migranten in Deutschland bestehen (Weidacher, 2000). Modelle der IRT sind dabei das Instrument der Wahl und sollen in der ersten Studie Anwendung finden.

Basierend auf vorliegenden Studien zur sprach- und kulturübergreifenden Vergleichbarkeit des PHQ-9 sind Unterschiede in der Funktionsweise der Items zu Schlaf, psychomotorischen

Veränderungen, Interessenverlust, Appetitveränderungen und Selbstwert zu erwarten. Dabei ist jedoch darauf hinzuweisen, dass bisher keine der Studien die deutsche und türkische Version des PHQ-9 miteinander vergleichen hat. Die vorliegende Studie ist damit die erste, die sich mit der sprach- und kulturübergreifenden Vergleichbarkeit der deutschen und türkischen Versionen des PHQ-9 beschäftigt. Folglich sollen alle Items des PHQ-9 ohne statistische Vorannahmen auf DIF getestet werden. Für diese Studie werden Daten aus verschiedenen Erhebungen für die dargestellte Fragestellung zusammengestellt und reanalysiert. Es sollen die Hypothesen geprüft werden, dass die deutsche und die türkische Version des PHQ-9 vergleichbar sind, und dass Werte von Deutschen ohne Migrationshintergrund und deutsch sprechenden türkischen Migranten in Deutschland vergleichbar sind.

3.2 PSYCHOTHERAPIEMOTIVATION VON PATIENTEN MIT MIGRATIONSHINTERGRUND

In Bezug auf diesen Themenkomplex wird ein zweischrittiges Vorgehen gewählt und je eine Studie aus den Bereichen *cross-cultural comparisons* und *migrant and minority health* durchgeführt. In einer kulturvergleichenden Studie sollen zunächst die Psychotherapiemotivation und die Krankheitsüberzeugungen bei Patienten mit türkischem Migrationshintergrund und Patienten ohne Migrationshintergrund verglichen werden. In einer Folgestudie soll eine kultursensible Intervention zur Steigerung der Psychotherapiemotivation bei Patienten mit türkischem Migrationshintergrund entwickelt und einer ersten Evaluation unterzogen werden.

3.2.1 Psychotherapiemotivation und Krankheitsüberzeugungen im interkulturellen Vergleich

Wie zuvor beschrieben, wurden Unterschiede in der Therapiemotivation und in Krankheitsüberzeugungen im Zusammenhang mit unterschiedlichen kulturellen Hintergründen festgestellt. Diese Unterschiede sind von besonderer Relevanz, da sie den Behandlungsverlauf und das Behandlungsergebnis einer Psychotherapie entscheidend beeinflussen können. Es soll daher in einer kulturvergleichenden Studie die Fragestellung untersucht werden, ob und welche Unterschiede in den Variablen Therapiemotivation und Krankheitsüberzeugungen zwischen Patienten mit türkischem Migrationshintergrund und Patienten ohne Migrationshintergrund in Deutschland bestehen.

Basierend auf vorhergehenden Befunden sollen zunächst die folgenden beiden Hypothesen überprüft werden: (1) Patienten mit einem türkischen Migrationshintergrund sind weniger für eine Psychotherapie motiviert als Patienten ohne türkischen Migrationshintergrund. (2) Patienten unterscheiden sich in Abhängigkeit vom Migrationshintergrund in den Krankheitsüberzeugungen: Patienten mit türkischem Migrationshintergrund haben stärkere fatalistisch-externale Kontrollüberzeugungen und sind überzeugter von fatalistischen oder übernatürlichen Krankheitsursachen als Patienten ohne Migrationshintergrund. Abschließend soll untersucht werden, ob (3) Unterschiede in den Krankheitsüberzeugungen Unterschiede in der Psychotherapiemotivation zwischen Patienten mit türkischem Migrationshintergrund und Patienten ohne Migrationshintergrund erklären können. Hierzu soll eine Mediatoranalyse durchgeführt werden.

3.2.2 Steigerung der Psychotherapiemotivation von Patienten mit türkischem Migrationshintergrund

Aus dem aktuellen Stand der Forschung lässt sich schließen, dass Schwierigkeiten bezüglich der Psychotherapiemotivation bei Patienten mit türkischem Migrationshintergrund bestehen. Insbesondere ungünstige Erwartungen an die Behandlung, abweichende Erwartung bezüglich der Behandler-Patient-Beziehung oder ein anderes Verständnis von Krankheit und Behandlung können zu Problemen in der Psychotherapiemotivation und letztlich zu Schwierigkeiten in der Behandlung von Patienten mit türkischem Migrationshintergrund führen. Die Forderung nach speziellen Behandlungsangeboten und einer stärkeren soziokulturellen Orientierung von psychologischen Behandlungen wurde bereits mehrfach gestellt (Bäärnhielm, Jávo, & Mösko, 2013; Mösko et al., 2008; Priebe et al., 2011). Trotzdem gibt es bislang keine standardisierten Module, um die Psychotherapiemotivation von Patienten mit türkischem Migrationshintergrund zu steigern.

Ziel der dritten Studie ist die Entwicklung und Überprüfung einer kultursensiblen Intervention zur Steigerung der Psychotherapiemotivation bei Patienten mit türkischem Migrationshintergrund. Diese Intervention soll unter Nutzung bewährter motivationspsychologischer Ansätze web-basiert entwickelt werden, um die begrenzten Ressourcen an muttersprachlichem türkischen Personal optimal auszuschöpfen und die standardisierte Intervention später ohne größeren Aufwand in die klinische Routine überführen zu können.

Die Akzeptanz und die Nützlichkeit der Intervention sollen anhand einer Stichprobe von Patienten mit türkischem Migrationshintergrund in einem *randomized controlled trial* evaluiert werden. Es wird angenommen, dass sich die Patienten nach der Bearbeitung der motivationssteigernden Intervention besser auf die Psychotherapie vorbereitet fühlen und stärker motiviert sind, sich in der Behandlung aktiv zu beteiligen, als die Patienten einer aktiven Kontrollbedingung. Darüber hinaus sollen die Hypothesen überprüft werden, dass nach der Anwendung der motivationssteigernden Intervention die Wahrnehmung der Krankheit als bedrohlich und external-fatalistische Kontrollüberzeugungen reduziert sind, während internale und behandlungsbezogene Kontrollüberzeugungen und die Selbstwirksamkeitsüberzeugung steigen.

4 ZUSAMMENFASSUNG DER STUDIEN

Im Folgenden sind die Publikationen, die im Rahmen der vorliegenden Dissertation verfasst wurden, zusammenfassend dargestellt. Die vollständigen Manuskripte sind im Appendix zu finden.

4.1 STUDIE I: INTERKULTURELLE VALIDIERUNG DER DEUTSCHEN UND TÜRKISCHEN VERSIONEN DES PHQ-9: EIN ITEM RESPONSE THEORY-ANSATZ

Zitation: Reich, H., Rief, W., Brähler, E., & Mewes, R. (submitted). Cross-cultural validation of the German and Turkish versions of the PHQ-9: An IRT approach.

Hintergrund: Das Depressionsmodul des Patient Health Questionnaire, der PHQ-9, ist weltweit einer der am weitest verbreiteten Screening-Fragebögen zur Erfassung von depressiven Symptomen. Obwohl über 70 Sprachversionen des PHQ-9 zur Verfügung stehen, fehlen größtenteils noch sprach- und kulturübergreifende Validierungsstudien. Dementsprechend haben interkulturelle Vergleichsstudien zu Epidemiologie, Symptompräsentation und Verlauf depressiver Störungen, die den PHQ-9 zur Messung von Depression nutzen, bislang eine schwache methodische Basis. Es war das Ziel dieser Studie, herauszufinden, ob die Werte der türkischen und deutschen Version des PHQ-9 vergleichbar sind.

Methode: Es wurden Daten von Deutschen ohne Migrationshintergrund (deutsche Version des PHQ-9, N = 1.670) und türkischen Migranten in Deutschland (deutsche Version des PHQ-9, N = 191; türkische Version des PHQ-9, N = 116) genutzt, die zuvor im Rahmen anderer Untersuchungen erhoben worden waren, um sekundäre Analysen bezüglich der sprach- und kulturübergreifenden Validität des PHQ-9 durchzuführen. Differential Item Functioning (DIF) wurde mit Hilfe von Modellen der Item Response Theory (IRT) überprüft. Psychometrische Charakteristika und die Auswirkung von DIF auf Skalenebene wurden berichtet.

Ergebnisse: Verschiedene Items des PHQ-9 zeigten sprach- oder kulturbezogenes DIF, z.B. die Items „Schlafprobleme“, „Appetitveränderungen“ und „Interessenverlust“. Die Summenwerte des PHQ-9 waren dadurch jedoch nicht verzerrt. Das heißt, DIF hatte keine

Auswirkungen auf Skalenebene und die Summenwerte der deutschen und türkischen Version des PHQ-9 sind voll vergleichbar.

Diskussion: Die Studie ist auf Untersuchungen aus einem Land limitiert und enthielt keinen methodischen Gold-Standard wie ein strukturiertes klinisches Interview, um Depression zu erfassen. Gemäß den Ergebnissen der IRT-Analysen sind die Summenwerte des PHQ-9 ohne Anpassungen oder Korrekturen zwischen türkischen Migranten in Deutschland und Deutschen ohne Migrationshintergrund vergleichbar. Dies ist unabhängig davon, ob die deutsche oder die türkische Version des PHQ-9 verwendet wird. Der PHQ-9 scheint für die untersuchten linguistischen und kulturellen Gruppen nur marginal durch interkulturelle Unterschiede beeinflusst zu sein.

4.2 STUDIE II: PSYCHOTHERAPIEMOTIVATION UND KRANKHEITSÜBERZEUGUNGEN BEI PATIENTEN MIT TÜRKISCHEM MIGRATIONSHINTERGRUND IN DEUTSCHLAND: ERGEBNISSE EINER KULTURVERGLEICHENDEN STUDIE

Zitation: Reich, H., Bockel, L., & Mewes, R. (2015). Motivation for psychotherapy and illness beliefs in Turkish immigrant inpatients in Germany: Results of a cultural comparison study. *Journal of Racial and Ethnic Health Disparities,* 2 (1), 112-123. doi:10.1007/s40615-014-0054-y

Hintergrund: Die psychische Gesundheit einiger Migrantenpopulationen ist schlechter als die der Allgemeinbevölkerung. Dies ist zum Beispiel bei türkischen Migranten in Deutschland der Fall. Darüber hinaus wird die psychotherapeutische Behandlung von türkischen Migranten als komplex beschrieben und kann in vielen Fällen nicht erfolgreich abgeschlossen werden. Dies zeigt sich in häufigen Behandlungsabbrüchen und wenig Veränderung der Symptomatik im Laufe der Behandlung. Eine niedrige Psychotherapiemotivation und externalisierende Krankheitsüberzeugungen werden als Faktoren diskutiert, die die psychotherapeutische Behandlung und deren Ergebnis negativ beeinflussen können. Ziel dieser Studie war es, zu überprüfen, ob Unterschiede zwischen Patienten mit türkischem Migrationshintergrund und Patienten ohne Migrationshintergrund in der Psychotherapiemotivation und in Krankheitsüberzeugungen bestehen. Außerdem wurde getestet, ob bestimmte Krankheitsüberzeugungen eine verringerte Psychotherapiemotivation erklären können.

Methode: In dieser querschnittlichen Fragebogenstudie wurden N = 100 Patienten in stationärer Behandlung, die entweder einen türkischen Migrationshintergrund oder keinen Migrationshintergrund hatten, zu depressiven und somatoformen Symptomen, Psychotherapiemotivation, Krankheitswahrnehmung, krankheitsbezogenen Kontroll-überzeugungen und kausalen Krankheitsattributionen befragt. Die Stichproben wurden bzgl. Alter und Geschlecht parallelisiert. Patienten im Alter von 18 bis 65 Jahren mit der Diagnose einer depressiven oder somatoformen Erkrankung oder einer Belastungsstörung wurden in die Studie eingeschlossen. Ausgeschlossen wurden Patienten mit psychotischen oder manischen Symptomen, Substanzabhängigkeiten oder neurodegenerativen Erkrankungen. Gruppenunterschiede wurden mit Hilfe von Varianzanalysen überprüft; abschließend wurde eine hierarchische lineare Regressionsanalyse sowie eine multiple Mediatoranalyse zur Vorhersage von Psychotherapiemotivation durchgeführt.

Ergebnisse: Die Psychotherapiemotivation war bei Patienten mit türkischem Migrationshintergrund niedriger als bei Patienten ohne Migrationshintergrund (d = 0.54). Weitere Gruppenunterschiede zeigten sich darin, dass Patienten mit türkischem Migrationshintergrund ihre Krankheit als bedrohlicher wahrnahmen (d = 0.7) und geringere internale (d = 0.81) und höhere fatalistisch-externale Kontrollüberzeugungen (d = 0.7) hatten als Patienten ohne Migrationshintergrund. Außerdem waren Patienten mit türkischem Migrationshintergrund stärker von fatalistischen (d = 0.66) und übernatürlichen Krankheitsursachen (d = 1.03) überzeugt als die Vergleichsgruppe. Die hierarchische lineare Regression bestätigte die Bedeutsamkeit des Migrationshintergrundes und der Krankheitsüberzeugungen zur Aufklärung der Varianz in der Psychotherapiemotivation (p < .01 bzw. p < .05), während andere demographische Charakteristika und die berichtete Symptomschwere nicht zur Varianzaufklärung beitrugen. Die Befunde konnten mit der multiplen Mediatoranalyse bestätigt werden: stärkere fatalistisch-externale Kontrollüberzeugungen und der Glaube an übernatürliche Krankheitsursachen erklärten die schwächere Psychotherapiemotivation bei Patienten mit türkischem Migrationshintergrund (R^2 = .27).

Diskussion: Die Studie arbeitete mit relativ kleinen Stichproben, was die Generalisierbarkeit der Befunde einschränkt. Darüber hinaus wurden die meisten Fragebögen bislang nicht auf Messäquivalenz überprüft, weshalb die Ergebnisse mit Vorsicht interpretiert werden sollten.

Nichtsdestotrotz macht die Studie auf die Wichtigkeit von Krankheitsüberzeugungen bei der Behandlung von Patienten mit Migrationshintergrund deutlich. Insbesondere kulturell verankerte Krankheitsüberzeugungen sollten in der Therapie aktiv erfragt und nach Möglichkeit in die Behandlung integriert werden.

4.3 STUDIE III: MOTIVATION VON PATIENTEN MIT TÜRKISCHEM MIGRATIONSHINTERGRUND IN DER PSYCHOTHERAPIE: ENTWICKLUNG UND PILOTSTUDIE EINER KULTURELL ANGEPASSTEN, WEB-BASIERTEN INTERVENTION

Zitation: Reich, H., Zürn, D., & Mewes, R. (submitted). Engaging Turkish immigrants in psychotherapy: Development and pilot RCT of a culture-tailored, web-based intervention.

Hintergrund: Konventionelle Psychotherapie ist bei Patienten mit Migrationshintergrund häufig weniger effektiv und kann durch Probleme motivationaler Art erschwert sein. Kulturell angepasste Behandlungen können den Behandlungserfolg steigern. Das zentrale Element hierfür ist die Integration der Krankheitsüberzeugungen des Patienten. In der vorliegenden Studie wurde eine kulturell angepasste Intervention entwickelt. Dabei wurden Prinzipien des *Motivational Interviewing* und des *Ethnographic Interviewing* angewendet. Die Akzeptanz und Nützlichkeit in Bezug auf therapierelevante Variablen wie Selbstwirksamkeit und Krankheitsüberzeugungen wurden in einer randomisiert kontrollierten Pilotstudie überprüft.

Methode: Die Entwicklung der motivationssteigernden Intervention erfolgte web-basiert als *guided self help*. Für ein experimentelles Kontrollgruppendesign wurde eine angewandte Muskelentspannung als Kontrollbedingung gewählt, die ebenfalls web-basiert umgesetzt wurde. Eine Stichprobe von Patienten mit türkischem Migrationshintergrund (N = 26) arbeitete mit je einer der Interventionen und bewertete sie im Anschluss. Darüber hinaus füllten sie vor und nach der Arbeit mit den Interventionen Fragebögen zu Krankheitswahrnehmung, Kontrollüberzeugungen und Selbstwirksamkeitsüberzeugung aus.

Ergebnisse: Die Gesamtbewertung der motivationssteigernden Intervention fiel positiver aus als die der Kontrollbedingung (p = .001). Die Patienten, die mit der motivationssteigernden Intervention gearbeitet hatten, gaben an, sich besser auf die Therapie vorbereitet zu fühlen als die Patienten der Kontrollbedingung (p = .008). In der Gruppe, die mit der

motivationssteigernden Intervention gearbeitet hatte, stieg die Selbstwirksamkeitserwartung im Prä-Post-Vergleich an (p = .024), während external-fatalistische Kontrollüberzeugungen abnahmen (p = .021). Ein Nebenergebnis war, dass ca. die Hälfte der Probanden Unterstützung bei der Bedienung des Computers oder der web-basierten Interventionen benötigte.

Diskussion: Die Ergebnisse der Pilotstudie sind vielversprechend und verweisen auf einen brauchbaren Ansatz der entwickelten Intervention. Es konnte somit ein erster Schritt in Richtung praktikabler, kulturell angepasster psychotherapeutischer Module getan werden. In weiteren Studien ist zu überprüfen, ob die Intervention auch einen Effekt auf therapierelevantes Verhalten hat und ob dadurch das Behandlungsergebnis positiv beeinflusst werden kann.

5 ZUSAMMENFASSENDE DISKUSSION UND AUSBLICK

Die vorliegende Dissertation beschäftigt sich mit transkulturellen Aspekten der Psychotherapie. Diese Betrachtung erfolgt mit einem Fokus auf die Situation in Deutschland, wo türkische Migranten die größte Minderheit darstellen. Bezüglich der Erfassung von Depressivität im interkulturellen Kontext konnte ein wichtiger Teil zum methodischen Fundament der transkulturellen Forschung beigetragen werden, indem die kultur- und sprachübergreifende Vergleichbarkeit des PHQ-9 nachgewiesen wurde. Der PHQ-9 ist eines der wichtigsten Screening-Instrumente für Depression. Mit Hilfe von *Item Response Analysen* konnte in der vorliegenden Arbeit gezeigt werden, dass die Summenwerte des PHQ-9 zwischen Menschen mit türkischem Migrationshintergrund und Menschen ohne Migrationshintergrund voll vergleichbar sind, unabhängig davon ob, die deutsche oder die türkischen Version ausgefüllt wird. In einer zweiten, kulturvergleichenden Studie wurde die Hypothese bestätigt, dass Patienten mit türkischem Migrationshintergrund eine geringere Psychotherapiemotivation aufweisen als Patienten ohne Migrationshintergrund. Patienten mit türkischem Migrationshintergrund unterschieden sich darüber hinaus in ihren Krankheitsüberzeugungen von der Vergleichsgruppe: Sie nehmen ihre Krankheit als bedrohlicher wahr, haben geringere internale und höhere fatalistisch-externale Kontrollüberzeugungen und sind stärker von fatalistischen und übernatürlichen Krankheitsursachen überzeugt. Auf diesen Ergebnissen aufbauend wurde in einer dritten Studie eine web-basierte Intervention zur Steigerung der Psychotherapiemotivation von Patienten mit türkischem Migrationshintergrund entwickelt. Diese basiert auf Prinzipen des *Motivational Interviewing* und des *Ethnographic Interviewing*. In einer randomisiert kontrollierten Pilotstudie wurde die motivationssteigernde Intervention von der Zielgruppe positiv bewertet; die Patienten gaben an, sich besser auf die Therapie vorbereitet zu fühlen. Im Prä-Post-Vergleich geben die Patienten, die mit der motivationssteigernden Intervention gearbeitet hatten, eine gestiegene Selbstwirksamkeitserwartung an, während external-fatalistische Kontrollüberzeugungen abnahmen. Es konnte mit dieser Intervention eine Basis gelegt werden, um die Psychotherapiemotivation von Patienten mit türkischem Migrationshintergrund positiv zu beeinflussen.

Bei allen sprach- und kulturübergreifenden Validierungsstudien des PHQ-9 fällt auf, dass zwar zumeist die Vergleichbarkeit des Summenwertes bestätigt werden kann, dass jedoch

Differential Item Functioning (DIF) für einzelne Items besteht. Die messtheoretische Bestätigung, dass Summenwerte zwischen verschiedenen Versionen vergleichbar seien, beantwortet dabei noch nicht die grundlegende Frage, wieso sich einzelne Items in ihrer Funktionsweise zwischen Gruppen unterscheiden. In Studie I wurde beispielsweise festgestellt, dass zwischen türkischen Migranten und Deutschen ohne Migrationshintergrund DIF für die Items „Appetitveränderungen" und „Konzentrationsprobleme" besteht; türkische Migranten hatten eine niedrigere Schwelle, den klinisch bedeutsamen Antwortoptionen „mehr als die Hälfte der Tage" und „fast jeden Tag" zuzustimmen. Dieser Unterschied zwischen kulturellen Gruppen wurde in vergleichbaren Studien in den Niederlanden (Vergleich *Surinam Dutch vs. Dutch,* Baas et al., 2011) und den USA (Vergleich *African-American vs. White,* Crane et al., 2010) nicht gefunden. International liegen erste Studien zu Besonderheiten der Krankheitswahrnehmung und des Beschwerdeausdruck (*idioms of distress*) für einzelne kulturelle Gruppen vor (z.B. Hinton & Lewis-Fernández, 2010; Pedersen, Kienzler, & Gamarra, 2010), fehlen aber bislang größtenteils sowohl für die deutsche Mehrheitsbevölkerung ohne Migrationshintergrund als auch für türkische Migranten in Deutschland. In der klinischen Praxis in Deutschland wird Patienten mit Migrationshintergrund eine verstärkte Tendenz zu Somatisierung und psychosomatischen Beschwerden zugeschrieben (Behrens et al., 2008; Holzmann, Volk, Georgi, & Pflug, 1994; Mewes & Rief, 2009). Möglicherweise bestehen Unterschiede zwischen Deutschen ohne Migrationshintergrund und türkischen Migranten in Deutschland in der Wahrnehmung und im Ausdruck einer depressiven Erkrankung. In der deutschen Kultur werden Körper und Geist traditionell als getrennte Einheiten verstanden, was sich bei der Schilderung einer depressiven Erkrankung in der klinischen Praxis häufig in einer Fokussierung auf kognitive Aspekte (z.B. Grübeln, Selbstwertproblematik) zeigt. Körperliche Beschwerden werden teilweise nachrangig oder erst auf Nachfrage berichtet. In einer ganzheitlicheren Wahrnehmung des Selbst, wodurch die türkische Kultur geprägt ist, werden körperliche Beschwerden wie Appetitveränderungen eventuell anders in das Krankheitsbild integriert und von einer Person als gleichwertiges Symptom zu kognitiven Veränderungen wahrgenommen. Zum Thema *idioms of distress* bedarf es weiterer Studien, sowohl bei türkischen Migranten als auch in einer Reflektion der Krankheitswahrnehmungen der deutschen Mehrheitsbevölkerung. Letztere, „westlich" geprägte *idioms of distress* werden in den internationalen Klassifizierungssystemen als

„Standard“ aufgeführt und sind damit eventuell implizit von einem unvoreingenommenen Hinterfragen ausgenommen. Dies zeigt sich darin, dass im DSM-5 Bemühungen unternommen werden, *cultural syndromes* und *idioms of distress* aufzunehmen. Solche beziehen sich jedoch auf „fremde“ oder „exotische“ Krankheitswahrnehmungen (z.B. „Khyâl-Attacken“, Hofmann & Hinton, 2014) – wobei vergessen zu werden scheint, dass auch die eigene Krankheitswahrnehmung und -schilderung immer kulturell geprägt ist. Eine offene und mutige, ethnopsychologische Untersuchung und Reflektion der „deutschen“ Art und Weise, psychische Erkrankungen wahrzunehmen und zu berichten, wäre wünschenswert. Dies diente nicht zuletzt auch der Verbesserung der Versorgung von Patienten mit Migrationshintergrund, da die Selbsterfahrung und Selbstreflektion eigener kultureller Wahrnehmungen die Basis jeder transkulturell adäquaten Psychotherapie ist.

In Bezug auf das Thema Psychotherapiemotivation sind in der Forschung in den letzten zehn Jahren einige konzeptuelle Fortschritte zu verzeichnen. Die Operationalisierung bzw. Messung von Psychotherapiemotivation bedarf jedoch noch einer genaueren Betrachtung und Diskussion. Drieschner und Kollegen berichteten von einer *„conceptual ambiguity of measures for treatment motivation“* (2004, p. 1120), die sich in verschiedenen Fragebögen zur Erfassung von Psychotherapiemotivation wiederfindet. Beispiele sind die *„Motivation for Psychotherapy Scale (MOPS)“* (Rosenbaum & Horowitz, 1983), das *„Motivation–Attitude–Expectancy profile“* (De Moor & Croon, 1987) und die *„Nijmegen Motivation List“* (Keijsers, Schaap, Hoogduin, Hoogsteyns, & de Kemp, 1999). Die Problematik soll anhand der MOPS kurz verdeutlicht werden: Der Fragebogen wurde mit Hilfe von Faktoranalysen aus zahlreichen Variablen konstruiert, die die Autoren als für Psychotherapiemotivation relevant ansahen. Aus diesem Ansatz resultierten vier Skalen, die als „Dimensionen“ von Psychotherapiemotivation bezeichnet wurden. Die Skalen *„positive valuation of therapy“* und *„psychological mindedness“* erfassen internale Determinanten von Psychotherapiemotivation, während sich die Skala *„active engagement“* eher auf das Verhalten bezieht, welches von Psychotherapiemotivation vorausgesagt werden soll. Einzig die Skala *„willingness to sacrifice“* bezieht sich auf Psychotherapiemotivation im engeren Sinne (Drieschner et al., 2004). Der in Studie II verwendete „Fragebogen zur Messung von Psychotherapiemotivation“ (Schneider, Basler, & Beisenherz, 1989) stellt bezüglich der beschriebenen konzeptuellen Problematik leider keine Ausnahme dar. Die vier Skalen des Fragebogens – Krankheitserleben, Laienätiologie, Behandlungserwartungen und Offenheit für Psychotherapie – erfassen

internale Determinanten von Psychotherapiemotivation anstatt der Motivation selbst. Für die Erfassung von Psychotherapiemotivation wurden in Studie II die beiden letzten Skalen dieses Fragebogens verwendet. Dies bedeutet, dass die Aussage, Patienten mit türkischem Migrationshintergrund hätten eine niedrigere Psychotherapiemotivation, spezifiziert werden muss: Türkische Migranten haben in Bezug auf verschiedene internale Determinanten von Psychotherapiemotivation ungünstigere Werte als Patienten ohne Migrationshintergrund. Psychotherapiemotivation im engeren Sinne wurde nicht erfasst. Dies verringert v.a. den Erkenntnisgewinn, der aus der hierarchischen linearen Regressionsanalyse sowie der multiplen Mediatoranalyse gezogen werden kann, da hier die zuvor genannten Skalen „Behandlungserwartungen" und „Offenheit für Psychotherapie" als Kriterium für Psychotherapiemotivation verwendet wurden. Es wurde folglich aufgezeigt, dass Zusammenhänge zwischen verschiedenen internalen Determinanten von Psychotherapiemotivation bestehen, und dass diese mit der Gruppenzugehörigkeit in Zusammenhang stehen.

Die dieser Arbeit zu Grunde gelegte Konzeptualisierung von Psychotherapiemotivation nach Drieschner und Kollegen (2004) besitzt den Vorteil, viele relevante internale Determinanten zur Vorhersage von Motivation einzubeziehen. Sie vereint damit verschiedene vorangehende Modelle und Ideen und hilft, Motivation klarer zu definieren. Im Gegensatz zu den Stufenmodellen, von denen das vorgestellte *Transtheoretical model of behavior change* (Prochaska & Di Clemente, 1982) eines der bekanntesten ist, werden bei Kontinuumsmodellen wie dem von Drieschner und Kollegen einflussreiche Prädiktorvariablen identifiziert und zur Vorhersage von *einer* Variable (hier: Psychotherapiemotivation) genutzt. Eine generelle Schwäche von Kontinuumsmodellen ist jedoch, dass sie mehr Varianz der Motivationsvariable aufklären als des Verhaltens (Schwarzer, 2008). Damit bleibt eine Lücke zwischen der Motivation und dem Verhalten selbst (Sheeran, 2002). Die Frage nach der Umsetzung von Motivation in Verhalten ist vor allem dann von Interesse, wenn es wie in Studie III um die Entwicklung von motivationssteigernden Interventionen geht. Können solche Interventionen therapierelevantes Verhalten und das Therapieergebnis tatsächlich verändern? Das Modell von Drieschner und Kollegen (2004, siehe Abbildung 2) berücksichtigt in der Folge von Motivation und Verhalten lediglich *„limitations to volitional control"* – führt aber nicht aus, welche Variablen den Umgang mit solchen Einschränkungen beeinflussen bzw. wie

Individuen mit auftretenden Barrieren oder Rückschlägen umgehen. Der *Health Action Process Approach* (HAPA, Schwarzer, 2008) hat sich zum Ziel gesetzt, die Lücke zwischen Motivation und Verhalten zu erklären. Schwarzer integriert nach der motivationalen Phase eine volitionale Phase, deren Kernprozesse zunächst *Action Planning* und *Coping Planning* sind, woraufhin die Aktion an sich folgt, bestehend aus einem Kreislauf aus *Initiative*, *Maintenance* und *Recovery*. Beeinflusst wird diese volitionale Phase laut Schwarzer durch *Maintenance Self-Efficacy* und *Recovery Self-Efficacy*. Die detailliertere Integration von relevanten Variablen in den Prozess der Verhaltensinitiation und –aufrechterhaltung, wie sie im HAPA-Modell vorgeschlagen wird, ermöglicht eine exaktere Planung von Interventionen sowie Erfassung von Veränderungsprozessen als Drieschners Konzeption.

In der vorliegenden Dissertation ist es gelungen, Studien an türkischen Migranten im Allgemeinen und Patienten mit türkischem Migrationshintergrund im Besonderen durchzuführen, welche meist auf Grund von Sprachproblemen aus der Forschung ausgeschlossen werden. Ungeachtet dessen unterliegen die hier vorgestellten Studien einigen Einschränkungen. In den Studien I und II bestehen sozio-demographische Unterschiede zwischen den untersuchten Stichproben, die jedoch den verschiedenen Bevölkerungsgruppen in Deutschland inhärent sind (vgl. Woellert et al., 2009, Statistisches Bundesamt, 2014). Eine Differenzierung insbesondere der Einflüsse von Bildung, Beschäftigungsstatus und Migration auf Psychotherapiemotivation und Krankheitsüberzeugungen wäre dennoch wünschenswert. Studie I bezieht sich nur auf Personen, die zum Zeitpunkt der Erhebung in Deutschland gelebt haben. Eine Unterscheidung zwischen den Einflüssen von Migration und Kultur, wie sie bei Einbeziehung einer Stichprobe von in der Türkei lebenden Türken möglich wäre, ist hier nicht möglich. Dies gilt auch für Studie II. Ferner fehlt in Studie I ein klinischer Goldstandard (z.B. ein strukturiertes klinisches Interview) zur Erfassung von Depression, wodurch keine Unterschiede in der Sensitivität und Spezifität, v.a. bezüglich der für den PHQ-9 vorgeschlagenen Cutoffs, für die verschiedenen Stichproben untersucht werden konnten. Schließlich ist Studie I eine Sekundäranalyse von Daten aus anderen Untersuchungen. Dies beinhaltet, dass die originalen Erhebungen in der Art und Weise der Rekrutierung und Datenerhebung nicht voll vergleichbar sind. Die Studien II und III arbeiten mit Patienten in stationärer Behandlung und kleinen Stichproben, in denen Migranten erster Generation überrepräsentiert sind. Dies schränkt die Generalisierbarkeit

der Ergebnisse ein. Aussagen aus diesen Studien können nicht ohne Weiteres auf Migranten zweiter und dritter Generation, Patienten in ambulanter Behandlung oder Menschen ohne psychische Erkrankungen übertragen werden. Mehrere der verwendeten Fragebögen sind in der türkischen Version noch nicht ausreichend validiert. Die darüber hinaus zumeist fehlende interkulturelle Validierung wirkt sich vor allem auf Studie II aus, die als kulturvergleichende Studie darauf angewiesen ist, dass die eingesetzten Messinstrumente in beiden untersuchten Gruppen vergleichbar sind. Die Ergebnisse sind demnach mit Vorsicht zu interpretieren.

Die vorliegende Dissertation brachte einige neue Erkenntnisse für das Feld der transkulturellen klinischen Psychologie, das in Deutschland trotz seines medialen Bildes als „Einwandererland" immer noch ein Randthema ist. Besonders hervorzuheben ist, dass der PHQ-9 als Depressionsfragebogen zwischen Deutschen ohne Migrationshintergrund und türkischen Migranten in Deutschland voll vergleichbar ist – unabhängig davon, ob die deutsche oder türkische Version des Fragebogens eingesetzt wird. Außerdem wurden durch eine kulturell angepasste Intervention praxisnahe Beispiele geschaffen, wie die Psychotherapiemotivation in der psychotherapeutischen Behandlung von türkischen Migranten positiv beeinflusst werden kann. Für zukünftige Studien bleiben u.a. die Fragen offen, ob interkulturelle Unterschiede in der Wahrnehmung oder im Ausdruck depressiver Erkrankungen bestehen, und ob der PHQ-9 relationalen oder externen Verzerrungen bezüglich anderen Variablen (z.B. Symptomausdruck) unterliegt, welche ggf. die prädiktive Validität einschränken. Es bleibt außerdem offen, die Messung von Psychotherapie-motivation an sich zu verbessern, da sich – wie oben dargestellt – viele aktuell genutzte Fragebögen vor allem auf internale Determinanten von Psychotherapiemotivation beziehen oder das Verhalten erfassen, welches von Psychotherapiemotivation vorausgesagt werden soll. Eine Aufgabe für die Psychotherapieprozessforschung bleibt die Untersuchung der Effekte, die Motivation in der psychotherapeutischen Behandlung auf Verhalten hat. Hierbei wäre die Integration von Fremdratings, wie z.B. Einschätzungen des Behandlers, oder objektiveren Maßen, wie z.B. Therapieerfolg, wünschenswert. Ebenso von Interesse wäre eine Untersuchung der hier bearbeiteten Fragestellungen bei Menschen mit anderen Migrationshintergründen, wie z.B. so genannte „Russlanddeutsche" oder Asylbewerber.

In der Gesamtschau der Ergebnisse und in der klinischen Praxis sollte nicht vergessen werden, dass Unterschiede zwischen Individuen einer Gruppe größer sind als die Unterschiede zwischen Gruppen. Es sollte folglich Abstand davon genommen werden, die hier dargestellten Ergebnisse ungeprüft auf einzelne Individuen zu übertragen. Individuelle Variationen innerhalb kultureller Gruppen sind nicht nur in der praktischen Beschäftigung mit einzelnen Patienten von großer Bedeutung (z.B. um Missverständnissen zu vermeiden), sondern sollten auch in der Zukunft im Sinne von Subgruppenanalysen bei Studien mit größeren Stichproben stärker in den Fokus gerückt werden. Gerade unter Berücksichtigung des Befundes, dass die Vielfalt der Krankheitsüberzeugungen bei Patienten mit türkischem Migrationshintergrund breiter zu sein scheint als bei Patienten der Mehrheitsbevölkerung, ist ein genaues und offenes Explorieren der Krankheitsüberzeugungen eines Patienten von zentraler Bedeutung. Schließlich kann der kulturelle Hintergrund eines Patienten auch eine wichtige Ressource sein, wenn es beispielsweise gelingt, spirituelle oder religiöse Praktiken und Überzeugungen in einer für den Patienten förderlichen Art und Weise in die Behandlung zu integrieren. Ein Beispiel aus eigener klinischer Praxis soll dies zum Abschluss verdeutlichen: Eine komplex traumatisierte Patientin mit türkischem Migrationshintergrund berichtete auf Nachfrage von parasuizidalen Verhaltensweisen; sie fahre auf kurvigen Landstraßen viel zu schnell Auto. Falls sie einen Unfall erleiden sollte, würde ja keiner ihrer Angehörigen wissen, dass sie sich den eigenen Tod gewünscht habe, erklärte sie im Weiteren. Auf offene Nachfragen zu ihren religiösen Überzeugungen konnte die Patientin reflektieren, dass zumindest Allah wisse, dass sie absichtlich zu schnell fahre. Sie entschied sich, von solchen Verhaltensweisen Abstand zu nehmen, da sie nicht sündigen wolle. Stattdessen begann sie, wieder regelmäßiger zu beten. Diese achtsame Pflege eines für die Patientin kulturell bedeutsamen Rituals gab ihr Kraft, mit Hilfe der Therapie an ihren Problemen zu arbeiten.

6 LITERATURVERZEICHNIS

Adler, M., Hetta, J., Isacsson, G., & Brodin, U. (2012). An item response theory evaluation of three depression assessment instruments in a clinical sample. *BMC Medical Research Methodology*, *12*, 84. http://doi.org/10.1186/1471-2288-12-84

Aichberger, M. C., Schouler-Ocak, M., Mundt, A., Busch, M. A., Nickels, E., Heimann, H. M., … Rapp, M. A. (2010). Depression in middle-aged and older first generation migrants in Europe: results from the Survey of Health, Ageing and Retirement in Europe (SHARE). *European Psychiatry*, *25*(8), 468–475. http://doi.org/10.1016/j.eurpsy.2009.11.009

Ajzen, I. (1988). *Attitudes, personality, and behavior*. Stony Stratford, UK: Open University Press.

Alegria, M., Atkins, M., Farmer, E., Slaton, E., & Stelk, W. (2010). One size does not fit all: taking diversity, culture and context seriously. *Administration and Policy in Mental Health*, *37*(1-2), 48–60. http://doi.org/10.1007/s10488-010-0283-2

American Psychiatric Association, [APA]. (2013). Diagnostic and statistical manual of mental disorders, DSM-5. Arlington, VA: American Psychiatric Publishing.

Andrade, L., Caraveo-Anduaga, J. J., Berglund, P., Bijl, R. V., De Graaf, R., Vollebergh, W., … Wittchen, H. U. (2003). The epidemiology of major depressive episodes: Results from the International Consortium of Psychiatric Epidemiology (ICPE) Surveys. *International Journal of Methods in Psychiatric Research*, *12*(1), 3–21. http://doi.org/10.1002/mpr.138

Arthurs, E., Steele, R. J., Hudson, M., Baron, M., & Thombs, B. D. (2012). Are scores on English and French versions of the PHQ-9 comparable? An assessment of differential item functioning. *PloS One*, *7*(12), e52028. http://doi.org/10.1371/journal.pone.0052028

Atkinson, J. W. (1957). Motivational determinants of risk taking behavior. *Psychological Review*, *64*, 359–372.

Ayuso-Mateos, J. L., Vázquez-Barquero, J. L., Dowrick, C., Lehtinen, V., Dalgard, O. S., Casey, P., … Wilkinson, G. (2001). Depressive disorders in Europe: prevalence figures from the ODIN study. *The British Journal of Psychiatry*, *179*, 308–16.

Bäärnhielm, S., & Ekblad, S. (2000). Turkish migrant women encountering health care in Stockholm: a qualitative study of somatization and illness meaning. *Culture, Medicine and Psychiatry*, *24*(4), 431–452.

Bäärnhielm, S., Jávo, C., & Mösko, M.-O. (2013). Opening up mental health service delivery to cultural diversity: current situation, development and examples from three northern European countries. *Advances in Psychosomatic Medicine*, *33*, 40–55. http://doi.org/10.1159/000348730

Baas, K. D., Cramer, A. O. J., Koeter, M. W. J., van de Lisdonk, E. H., van Weert, H. C., & Schene, A. H. (2011). Measurement invariance with respect to ethnicity of the Patient Health Questionnaire-9 (PHQ-9). *Journal of Affective Disorders*, *129*(1-3), 229–35. http://doi.org/10.1016/j.jad.2010.08.026

Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Englewood Cliffs, NJ: Prentice-Hall.

Barrera, M., Castro, F. G., Strycker, L. a, & Toobert, D. J. (2013). Cultural adaptations of behavioral health interventions: A progress report. *Journal of Consulting and Clinical Psychology*, *81*(2), 196–205. http://doi.org/10.1037/a0027085

Behrens, K., Machleidt, W., Haltenhof, H., Ziegenbein, M., & Calliess, I. T. (2008). [Somatization and vulnerability to offence in immigrants with mental disorders - evidence or eminence?]. *Nervenheilkunde*, *27*, 639–643.

Benish, S. G., Quintana, S., & Wampold, B. E. (2011). Culturally adapted psychotherapy and the legitimacy of myth: a direct-comparison meta-analysis. *Journal of Counseling Psychology*, *58*(3), 279–289. http://doi.org/10.1037/a0023626

Betancourt, H., & Lopez, S. (1993). The study of culture, ethnicity, and race in American psychology. *American Psychologist*, 629–637.

Bhugra, D. (2004). Migration and mental health. *Acta Psychiatrica Scandinavica*, *109*(4), 243–258.

Bhugra, D. (2005). Cultural identities and cultural congruency: a new model for evaluating mental distress in immigrants. *Acta Psychiatrica Scandinavica*, *111*, 84–93. http://doi.org/10.1111/j.1600-0447.2004.00454.x

Blum, L. (1988). Motivation: escape to freedom, the important ingredient in short-term psychotherapy. *Psychological Reports*, *63*, 381–382.

Bowling, A. (1994). Beliefs about illness causation among Turkish and white British people living in a deprived inner London district. *Health Education Research*, *9*(3), 355–364. http://doi.org/10.1093/her/9.3.355

Calliess, I. T., Schmid-Ott, G., Akguel, G., Jaeger, B., & Ziegenbein, M. (2007). [Attitudes towards psychotherapy of young second-generation Turkish immigrants living in Germany]. *Psychiatrische Praxis*, *34*, 343–348.

Camilli, G., & Shepard, L. (1994). *Methods for Identifying Biased Test Items*. Thousand Oaks: Sage Publications.

Crane, P. K., Gibbons, L. E., Willig, J. H., Mugavero, M. J., Lawrence, S. T., Schumacher, J. E., … Crane, H. M. (2010). Measuring depression levels in HIV-infected patients as part of routine clinical care using the nine-item Patient Health Questionnaire (PHQ-9). *AIDS Care*, *22*(7), 874–85. http://doi.org/10.1080/09540120903483034

De Moor, W., & Croon, M. (1987). [The initial motivation–attitudes–expectancy profile of clients in psychotherapy: A psychometric study]. *Tijdschrift Voor Psychotherapie*, *13*, 3–14.

De Wit, M. A. S., Tuinebreijer, W. C., Dekker, J., Beekman, A. J. T. F., Gorissen, W. H. M., Schrier, A. C., … Verhoeff, A. P. (2008). Depressive and anxiety disorders in different ethnic groups: a population based study among native Dutch, and Turkish, Moroccan and Surinamese migrants in Amsterdam. *Social Psychiatry and Psychiatric Epidemiology*, *43*(11), 905–912. http://doi.org/10.1007/s00127-008-0382-5

Deisenhammer, E. a, Coban-Başaran, M., Mantar, A., Prunnlechner, R., Kemmler, G., Alkın, T., & Hinterhuber, H. (2011). Ethnic and migrational impact on the clinical manifestation of depression. *Social Psychiatry and Psychiatric Epidemiology*. http://doi.org/10.1007/s00127-011-0417-1

Drasgow, F. (1982). Biased test items and differential validity. *Psychological Bulletin*, *92*(2), 526–531. http://doi.org/10.1037/0033-2909.92.2.526

Drasgow, F. (1987). Study of the measurement bias of two standardized psychological tests. *Journal of Applied Psychology*, *72*(1), 19–29. http://doi.org/10.1037/0021-9010.72.1.19

Drieschner, K. H., Lammers, S. M. M., & van der Staak, C. P. F. (2004). Treatment motivation: An attempt for clarification of an ambiguous concept. *Clinical Psychology Review*, *23*(8), 1115–1137. http://doi.org/10.1016/j.cpr.2003.09.003

Embretson, S., & Reise, S. (2013). *Item response theory for psychologists*. Hove, UK: Psychology Press.

Erim, Y., Morawa, E., Özdemir, D. F., & Senf, W. (2011). [Prevalence , Comorbidity and Severity of Psychosomatic Disorders in Outpatients with Turkish Migration Background]. *Psychotherapie Psychosomatik Medizinische Psychologie*, *61*, 472–480.

Eskin, M. (1989). Rural population's opinions about the causes of mental illness, modern psychiatric help-sources and traditional healers in Turkey. *International Journal of Social Psychiatry*, *35*(4), 324–328. http://doi.org/10.1177/002076408903500404

Eurostat. (2011). *Migrants in Europe: A statistical portrait of the first and second generation*. Luxembourg: European Union. http://doi.org/10.2785/5318

Fassaert, T., de Wit, M. A. S., Tuinebreijer, W. C., Verhoeff, A. P., Beekman, A. T. F., & Dekker, J. (2009). Perceived need for mental health care among non-western labour migrants. *Soc Psychiatry Psychiatr Epidemiol*, *44*(3), 208–216. http://doi.org/10.1007/s00127-008-0418-x

Ferber, L. V, Köster, I., & Celayir-Erdogan, N. (2003). [Turkish and German patients of general practitioners - diseases, drug expectations and drug prescriptions]. *Gesundheitswesen*, *65*(5), 304–311.

Frank, J. D., & Frank, J. B. (1993). *Persuasion and healing*. Baltimore, MD: Johns Hopkins University Press.

Franz, M., Lujic, C., Koch, E., Wüsten, B., Yürük, N., & Gallhofer, B. (2007). [Subjective illness beliefs of Turkish migrants with mental disorders - specific characteristics compared to German patients]. *Psychiatrische Praxis*, *34*, 332–338. http://doi.org/10.1055/s

Giese, A., Uyar, M., Uslucan, H. H., Becker, S., & Henning, B. F. (2013). How do hospitalised patients with Turkish migration background estimate their language skills and their comprehension of medical information - a prospective cross-sectional study and comparison to native patients in Germany to assess the language barrier . *BMC Health Services Research*, *13*, 196. http://doi.org/10.1186/1472-6963-13-196

Glaesmer, H., Wittig, U., Braehler, E., Martin, A., Mewes, R., & Rief, W. (2011). Health care utilization among first and second generation immigrants and native-born Germans: a population-based study in Germany. *International Journal of Public Health*, *56*(5), 541–548. http://doi.org/10.1007/s00038-010-0205-9

Göbber, J., Pfeiffer, W., Winkler, M., Kobelt, A., & Petermann, F. (2010). [Inpatient health care treatment for patients of Turkish descent - special challenges and treatment results]. *Zeitschrift Für Psychiatrie, Psychologie Und Psychotherapie*, *58*(3), 181–187. http://doi.org/10.1024/1661-4747/a000026

Gone, J., & Kirmayer, L. (2010). On the wisdom of considering culture and context in psychopathology. In T. Millon, R. Krueger, & E. Simonsen (Eds.), *Contemporary Directions in Psychopathology: Scientific Foundations of the DSM-V and ICD-11* (pp. 77–96). New York: Guilford.

González, H. M., Tarraf, W., Whitfield, K. E., Vega, W. W. A., & González, H. M. H. (2010). The epidemiology of major depression and ethnicity in the United States. *Journal of Psychiatric Research*, *44*(15), 1043–1051. http://doi.org/10.1016/j.jpsychires.2010.03.017

Hasin, D., Goodwin, R., Stinson, F., & Grant, B. (2005). Epidemiology of major depressive disorder. *Archives of General Psychiatry*, *62*, 1097–1106.

Heckhausen, H. (1991). *Motivation and action*. Berlin: Springer-Verlag.

Hepner, K. A., Morales, L. S., Hays, R. D., Edelen, M. O., & Miranda, J. (2008). Evaluating differential item functioning of the PRIME-MD mood module among impoverished black and white women in primary care. *Women's Health Issues*, *18*(1), 53–61. http://doi.org/10.1016/j.whi.2007.10.001

Hettema, J., Steele, J., & Miller, W. R. (2005). Motivational interviewing. *Annual Review of Clinical Psychology*, *1*, 91–111. http://doi.org/10.1146/annurev.clinpsy.1.102803.143833

Hinton, D. E., & Lewis-Fernández, R. (2010). Idioms of distress among trauma survivors: subtypes and clinical utility. *Culture, Medicine and Psychiatry*, *34*(2), 209–18. http://doi.org/10.1007/s11013-010-9175-x

Hirsch, O., Donner-Banzhoff, N., & Bachmann, V. (2013). Measurement Equivalence of Four Psychological Questionnaires in Native-Born Germans, Russian-Speaking Immigrants, and Native-Born Russians. *Journal of Transcultural Nursing*. http://doi.org/10.1177/1043659613482003

Hofmann, S. G., & Hinton, D. E. (2014). Cross-cultural aspects of anxiety disorders. *Current Psychiatry Reports*, *16:450*. http://doi.org/10.1007/s11920-014-0450-3

Holland, P., & Wainer, H. (1993). *Differential Item Functioning*. Hillsdale (NJ): Lawrence Erlbaum Associates.

Holzmann, T., Volk, S., Georgi, K., & Pflug, B. (1994). Ausländische Patienten in stationärerer Behandlung in einer psychiatrischen Universitätsklinik mit Versorgungsauftrag. *Psychiatrische Praxis*, *21*, 106–108.

Huang, F. Y., Chung, H., Kroenke, K., Delucchi, K. L., & Spitzer, R. L. (2006). Using the Patient Health Questionnaire-9 to measure depression among racially and ethnically diverse primary care patients. *Journal of General Internal Medicine*, *21*(6), 547–52. http://doi.org/10.1111/j.1525-1497.2006.00409.x

Kear-Colwell, J., & Pollock, P. (1997). Motivation or confrontation. *Criminal Justice and Behavior*, *24*, 20–33. http://doi.org/0803973233

Keijsers, G. P. J., Schaap, C. P. D. R., Hoogduin, C. A. L., Hoogsteyns, B., & de Kemp, E. C. M. (1999). Preliminary results of a new instrument to assess patient motivation for treatment in cognitive-behaviour therapy. *Behavioural and Cognitive Psychotherapy*, *27*, 165–179.

Keithly, L. J., Samples, S. J., & Strupp, H. H. (1980). Patient Motivation as a Predictor of Process and Outcome in Psychotherapy. *Psychotherapy and Psychosomatics*, *33*(1-2), 87–97. http://doi.org/10.1159/000287417

Kirmayer, L. J., & Ban, L. (2013). Cultural psychiatry: research strategies and future directions. *Advances in Psychosomatic Medicine*, *33*, 97–114. http://doi.org/10.1159/000348742

Kirmayer, L. J., & Sartorius, N. (2007). Cultural models and somatic syndromes. *Psychosomatic Medicine*, *69*(9), 832–840. http://doi.org/10.1097/PSY.0b013e31815b002c

Kirmayer, L. J., & Young, A. (1998). Culture and somatization: clinical, epidemiological, and ethnographic perspectives. *Psychosomatic Medicine*, *60*(4), 420–30.

Kizilhan, J. (2008). [Interaction of illness perception and coping with Turkish patients - a comparative study]. *Verhaltenstherapie & Verhaltenstherapie*, *29*(4), 352–366.

Klauer, T., Maibaum, F., & Schneider, W. (2007). [Patient and therapist reports of treatment motivation as predictors of dropout from inpatient psychotherapy]. *Zeitschrift Für*

Psychiatrie, Psychologie Und Psychotherapie, *55*(1), 59–66. http://doi.org/10.1024/1661-4747.55.1.59

Kleinginna, P. R. J., & Kleinginna, A. M. (1981). A categorized list of motivation definitions, with a suggestion for a consensual definition. *Motivation and Emotion*, *5*(3), 263–291.

Kleinmann, A. (1980). *Patients and healers in the context of culture: An exploration of the borderland between anthropology, medicine, and psychiatry*. Berkeley, California: University of California Press.

Koch, E., Hartkamp, N., Siefen, R. G., & Schouler-Ocak, M. (2008). [German pilot study of psychiatric inpatients with histories of migration]. *Der Nervenarzt*, *79*(3), 328–39. http://doi.org/10.1007/s00115-007-2393-y

Krause, M. S. (1966). A cognitive theory of motivation for treatment. *The Journal of General Psychology*, *75*, 9–19.

Kroenke, K., Spitzer, R. L., & Williams, J. B. (2001). The PHQ-9: validity of a brief depression severity measure. *Journal of General Internal Medicine*, *16*(9), 606–13.

Larke, J. (1985). Compulsory treatment: Some practical methods of treating the mandated client. *Psychotherapy*, *22*, 262–268.

Lindert, J., Ehrenstein, O. S. Von, Priebe, S., Mielck, A., & Brähler, E. (2009). Depression and anxiety in labor migrants and refugees - a systematic review and meta-analysis. *Social Science & Medicine*, *69*(2), 246–57. http://doi.org/10.1016/j.socscimed.2009.04.032

Löwe, B., Kroenke, K., Herzog, W., & Gräfe, K. (2004). Measuring depression outcome with a brief self-report instrument: sensitivity to change of the Patient Health Questionnaire (PHQ-9). *Journal of Affective Disorders*, *81*(1), 61–6. http://doi.org/10.1016/S0165-0327(03)00198-8

Löwe, B., Spitzer, R., Gräfe, K., Kroenke, K., Quenter, A., Zipfel, S., … Herzog, W. (2004). Comparative validity of three screening questionnaires for DSM-IV depressive disorders and physicians' diagnoses. *Journal of Affective Disorders*, *78*(2), 131–140. http://doi.org/10.1016/S0165-0327(02)00237-9

Löwe, B., Unützer, J., Callahan, C., Perkins, A., & Kroenke, K. (2004). Monitoring depression treatment outcomes with the patient health questionnaire-9. *Medical Care*, *42*(12), 1194–1201.

Lundahl, B. W., Kunz, C., Brownell, C., Tollefson, D., & Burke, B. L. (2010). A Meta-Analysis of Motivational Interviewing: Twenty-Five Years of Empirical Studies. *Research on Social Work Practice*, *20*(2), 137–160. http://doi.org/10.1177/1049731509347850

Machleidt, W., Behrens, K., & Ziegenbein, M. (2007). [Integration of immigrants into the mental health care system in Germany]. *Psychiatrische Praxis*, *34*, 325–331. Retrieved

from http://www.thieme-connect.com/ejournals/abstract/psychiat-praxis/doi/10.1055/s-2007-986192

Meichenbaum, D., & Turk, D. C. (1987). *Facilitating treatment adherence: A practitioner's guidebook*. New York: Plenum.

Meijer, R. R., & Baneke, J. J. (2004). Analyzing psychopathology items: a case for nonparametric item response theory modeling. *Psychological Methods*, *9*(3), 354–68. http://doi.org/10.1037/1082-989X.9.3.354

Melfi, C. A., Croghan, T. W., Hanna, M. P., & Robinson, R. L. (2000). Racial Variation in Antidepressant Treatment in a Medicaid Population. *Journal of Clinical Psychiatry*, *61*, 16–21.

Mewes, R., Christ, O., Rief, W., Brähler, E., Martin, A., & Glaesmer, H. (2010). Are depression and somatisation equivalent for migrants and native Germans? An investigation of measurement invariance for the PHQ-9 and PHQ-15. *Diagnostica*, *56*(4), 230–239. http://doi.org/10.1026/0012-1924/a000026

Mewes, R., & Rief, W. (2009). [Are somatoform complaints and causal attributions in Turkish migrants associated with their cultural background or the migration itself?]. *Zeitschrift Für Medizinische Psychologie*, *18*, 135–139.

Miller, W. R. (1985). Motivation for treatment: a review with special emphasis on alcoholism. *Psychological Bulletin*, *98*(1), 84–107.

Miller, W., & Rollnick, S. (1991). *Motivational interviewing: Preparing people to change addictive behavior*. New York: The Guildford Press.

Minas, H., Klimidis, S., & Tuncer, C. (2007). Illness causal beliefs in Turkish immigrants. *BMC Psychiatry*, *7*(34). http://doi.org/10.1186/1471-244X-7-34

Mösko, M., Schneider, J., Koch, U., & Schulz, H. (2008). [Does a Turkish migration background influence treatment outcome? Results of a prospective inpatient healthcare study]. *Psychotherapie, Psychosomatik, Medizinische Psychologie*, *58*, 176–182.

Murphy, C. M., & Baxter, V. A. (1997). Motivating batterers to change in the treatment context. *Journal of Interpersonal Violence*, *12*, 607–619. http://doi.org/0803973233

Newman, C. F. (1994). Understanding client resistance: Methods for enhancing motivation to change. *Cognitive and Behavioral Practice*, *1*(1), 47–69. http://doi.org/10.1016/S1077-7229(05)80086-0

Nickel, C., Muehlbacher, M., Kettler, C., Tritt, K., Egger, C., Lahmann, C., … Nickel, M. (2006). [Treatment motivation and results of inpatient psychotherapy for women with depressive disorders: a prospective study]. *Gesundheitswesen*, *68*(1), 11–17. http://doi.org/10.1055/s-2005-859011

Paykel, E. S., Brugha, T., & Fryers, T. (2005). Size and burden of depressive disorders in Europe. *European Neuropsychopharmacology*, *15*(4), 411–23. http://doi.org/10.1016/j.euroneuro.2005.04.008

Pedersen, D., Kienzler, H., & Gamarra, J. (2010). Llaki and Nakary: Idioms of distress and suffering among the highland Quechua in the Peruvian Andes. *Culture, Medicine and Psychiatry*, *34*(2), 279–300. http://doi.org/10.1007/s11013-010-9173-z

Petrie, K. J., & Weinman, J. (2012). Patients' Perceptions of Their Illness: The Dynamo of Volition in Health Care. *Current Directions in Psychological Science*, *21*(1), 60–65. http://doi.org/10.1177/0963721411429456

Pfizer Inc. (2013). Patient Health Questionnaires (PHQ) Screeners, official website. Retrieved from http://www.phqscreeners.com/overview.aspx?Screener=02_PHQ-9

Priebe, S., Sandhu, S., Dias, S., Gaddini, A., Greacen, T., Ioannidis, E., … Bogic, M. (2011). Good practice in health care for migrants: views and experiences of care professionals in 16 European countries. *BMC Public Health*, *11*(1), 187. http://doi.org/10.1186/1471-2458-11-187

Prochaska, J. O., & Di Clemente, C. C. (1982). Transtheoretical therapy: toward a more integrative model of change. *Psychotherapy: Theory, Research and Practice*, *19*, 276–288.

Prochaska, J. O., DiClemente, C. C., Velicer, W. F., & Rossi, J. S. (1992). Criticisms and concerns of the transtheoretical model in light of recent research. *British Journal of Addiction*, *87*, 825–835. http://doi.org/10.1111/j.1360-0443.1992.tb01973.x

Raney, S., & Çınarbas, D. (2005). Counseling in developing countries: Turkey and India as examples. *Journal of Mental Health Counselling*, *27*(2), 149–160.

Raskin, A. (1961). Factors therapists associate with motivation to enter psychotherapy. *Journal of Clinical Psychology*, *17*, 62–65.

Reich, H., Bockel, L., & Mewes, R. (2015). Motivation for psychotherapy and illness beliefs in Turkish immigrant inpatients in Germany: Results of a cultural comparison study. *Journal of Racial and Ethnic Health Disparities*, *2*(1), 112–123. http://doi.org/10.1007/s40615-014-0054-y

Reis, B. F., & Brown, L. G. (1999). Reducing psychotherapy dropouts: Maximizing perspective convergence in the psychotherapy dyad. *Psychotherapy, 36(2)*, *36*(2), 123–135.

Reise, S. P., & Waller, N. G. (2009). Item response theory and clinical measurement. *Annual Review of Clinical Psychology*, *5*, 27–48. http://doi.org/10.1146/annurev.clinpsy.032408.153553

Resnicow, K., Braithwaite, R., Ahluwalia, J., & Baranowski, T. (1999). Cultural sensitiviy in public health: defined and demystified. *Ethnicity and Disease*, *9*, 10–21.

Rollnick, S., Miller, W. R., & Butler, C. C. (2008). *Motivational Interviewing in Health Care: Helping patients change behavior*. New York, NY: The Guilford Press.

Rosenbaum, R., & Horowitz, M. (1983). Motivation for psychotherapy: a factorial and conceptual analysis. *Psychotherapy*, *20*(3), 346–354.

Rosenstock, I. M. (1965). Why people use health services. *Milbank Memorial Fund Quarterly*, *44*, 94–127.

Rosenstock, I. M., Strecher, V. J., & Becker, M. H. (1988). Social Learning Theory and the Health Belief Model. *Health Education & Behavior*, *15*(2), 175–183. http://doi.org/10.1177/109019818801500203

Rubak, S., Sandbæk, A., Lauritzden, T., & Christensen, B. (2005). Motivational interviewing: a systematic review and meta-analysis. *British Journal of General Practice*, *55*, 305–312.

Ryan, R. M., Plant, R. W., & O'Malley, S. (1995). Initial motivations for alcohol treatment: Relations with patient characteristics, treatment involvement, and dropout. *Addictive Behaviors*, *20*(3), 279–297. http://doi.org/10.1016/0306-4603(94)00072-7

Sariaslan, S., Morawa, E., & Erim, Y. (2014). [Mental distress in primary care patients: German patients compared with patients of Turkish origin]. *Der Nervenarzt*, *85*(5), 589–95. http://doi.org/10.1007/s00115-013-3767-y

Schenk, L., Bau, A. M., Borde, T., Butler, J., Lampert, T., Neuhauser, H., … Weilandt, C. (2006). Mindestindikatorensatz zur Erfassung des Migrationsstatus [Minimum set of indicators for measuring the migration status]. *Bundesgesundheitsblatt - Gesundheitsforschung - Gesundheitsschutz*, *49*(9), 853–860.

Schmeling-Kludas, C., Fröschlin, R., & Boll-Klatt, A. (2003). Stationäre psychosomatische Rehabilitation für türkische Migranten : Was ist realisierbar, was ist erreichbar? *Rehabilitation*, (42), 363–370.

Schneider, W., Basler, H. D., & Beisenherz, B. (1989). *[Questionnaire for the measurement of psychotherapy motivation: FMP]*. Weinheim: Beltz-Test.

Schneider, W., & Klauer, T. (2001). Symptom level, treatment motivation, and the effects of inpatient psychotherapy. *Psychotherapy Research*, *11*(2), 153–167.

Schopenhauer, A. (1972). Über die Freiheit des menschlichen Willens. In A. Hübscher (Ed.), *Arthur Schopenhauer: Sämtliche Werke, Band IV* (3rd ed.). Wiebaden: F. A. Brockhaus.

Schwarzer, R. (2008). Modeling Health Behavior Change: How to Predict and Modify the Adoption and Maintenance of Health Behaviors. *Applied Psychology*, *57*(1), 1–29. http://doi.org/10.1111/j.1464-0597.2007.00325.x

Sheeran, P. (2002). Intention-behavior relations: A conceptual and empirical review. *European Review of Social Psychology*, *12*, 1–36. http://doi.org/10.1080/14792772143000003

Sifneos, P. E. (1978). Motivation for Change. A Prognostic Guide for Successful Psychotherapy. *Psychotherapy and Psychosomatics*, *29*, 293–289. http://doi.org/10.1159/000287144

Smyth, N. (1996). Motivating persons with dual disorders: A stage approach. *Families in Society: The Journal of Contemporary Human Services*, *77*, 605–614.

Spitzer, R., Kroenke, K., & Williams, J. (1999). Validation and utility of a self-report version of PRIME- MD: The PHQ Primary Care Study. *JAMA*, *282*(18), 1737–1744.

Statistisches Bundesamt. (2014). *Bevölkerung und Erwerbstätigkeit: Bevölkerung mit Migrationshintergrund, Ergebnisse des Mikrozensus 2013*. Wiesbaden: Statistisches Bundesamt.

Sue, D. W., Arredondo, P., & McDavis, R. J. (1992). Multicultural counseling competencies and standards: A call to the profession. *Journal of Multicultural Counseling & Development*, *20*(2), 64–89.

Sutton, S. (2001). Back to the drawing board? A review of applications of the transtheoretical model to substance use. *Addiction*, *96*(1), 175–186. http://doi.org/10.1080/09652140020017049

Swartz, H. a., Zuckoff, A., Grote, N. K., Spielvogle, H. N., Bledsoe, S. E., Shear, M. K., & Frank, E. (2007). Engaging depressed patients in psychotherapy: Integrating techniques from motivational interviewing and ethnographic interviewing to improve treatment participation. *Professional Psychology: Research and Practice*, *38*(4), 430–439. http://doi.org/10.1037/0735-7028.38.4.430

Tuncer, C. (1995). Mental illness in an Islamic-Mediterranean culture: Turkey. In I. Al-Issa (Ed.), *Handbook of culture and mental illness: An international perspective.* (pp. 169–182). Madison, CT: International Universities Press.

Walitzer, K. S., Dermen, K. H., & Connors, G. J. (1999). Strategies for Preparing Clients for Treatment A Review. *Behavior Modification*, *23*(1), 129–151. http://doi.org/10.1177/0145445599231006

Waller, N. G., Thompson, J. S., & Wenk, E. (2000). Using IRT to separate measurement bias from true group differences on homogeneous and heterogeneous scales: An illustration with the MMPI. *Psychological Methods*, *5*(1), 125–146. http://doi.org/10.1037//1082-989X.5.1.125

Wampold, B. E. (2007). Psychotherapy: "The" humanistic (and effective) treatment. *American Psychologist*, *62*(8), 857–873. http://doi.org/10.1037/0003-066X.62.8.857

Weidacher, A. (2000). Schlußfolgerungen und partizipationspolitischer Ausblick [Conclusions and political forecast]. In A. Weidacher (Ed.), *In Deutschland zu Hause: politische Orientierungen griechischer, italienischer, türkischer und deutscher junger Erwachsener im Vergleich (DJI-Ausländersurvey) [At home in Germany: a comparison of*

political orientations in Greek, Italian, Turkish and Germa (pp. 265–272). Opladen: Leske + Budrich.

Westby, C. (1990). Ethnographic interviewing: Asking the right questions to the right people in the right ways. *Journal of Childhood Communication Disorders*, *13*(1), 101–111.

Wintrob, R. (2013). Reflections on current research and future challenges in cultural psychiatry. *Transcultural Psychiatry*, *50*(6), 765–8. http://doi.org/10.1177/1363461513513415

Wittchen, H.-U., & Jacobi, F. (2005). Size and burden of mental disorders in Europe - a critical review and appraisal of 27 studies. *European Neuropsychopharmacology*, *15*(4), 357–76. http://doi.org/10.1016/j.euroneuro.2005.04.012

Woellert, F., Kröhnert, S., Sippel, L., & Klingholz, R. (2009). *Ungenutzte Potenziale: Zur Lage der Integration in Deutschland*. Berlin-Institut für Bevölkerung und Entwicklung. http://doi.org/10.1007/978-3-531-19010-5_8

World Health Organization, [WHO]. (2001). The world health report: Mental health: New understanding and hope. Geneva: World Health Organization.

Wrenn, C. G. (1962). The culturally encapsulated counselor. *Harvard Educational Review*, *32*(4), 444–449.

Zayas, L. H., & Gulbas, L. E. (2012). Are suicide attempts by young Latinas a cultural idiom of distress? *Transcultural Psychiatry*. http://doi.org/10.1177/1363461512463262

7 APPENDIX

7.1 STUDIE I: MANUSKRIPT, EINGEREICHT BEI *ASSESSMENT*

Cross-cultural validation of the German and Turkish versions of the PHQ-9: An IRT approach

Running head: Cross-cultural validation of the PHQ-9

Hanna Reich[1], Winfried Rief[1], Elmar Brähler[2], and Ricarda Mewes[1]

[1]University of Marburg, Germany

[2]University of Leipzig, Germany

Author Note.

Hanna Reich, Winfried Rief, and Ricarda Mewes, Division of Clinical Psychology and Psychotherapy, Department of Psychology, University of Marburg, Marburg, Germany; Elmar Brähler, Institute of Medical Psychology, Medical School, University of Leipzig, Leipzig, Germany.

Elmar Brähler is now at the Clinic and Policlinic for Psychosomatic Medicine and Psychotherapy, University Medical Center Mainz, Mainz, Germany. Ricarda Mewes is now at the Division of Clinical Biopsychology, Department of Psychology, University of Marburg, Marburg, Germany.

Study 1 was supported by a grant from the German Research Foundation (DFG) to Prof. Rief et al. (Grant RI 574/14-1). We would like to thank PD Dr. Heide Gläsmer, Dipl.-Psych. Luisa Bockel, Dipl.-Psych. Johanna Laskawi, and Cand.-Psych. Daniela Zürn for their collaboration in data collection. We also express our thanks to the cooperating clinic sites: Vitos Clinic for Psychiatry and Psychotherapy Marburg (Medical Director: Prof. Dr. Dr. Matthias J. Müller); "Parkland-Klinik" Bad Wildungen; Clinic for Psychiatry and Psychotherapy at the Hospital of Offenbach; Clinic for Psychiatry, Psychotherapy, and Psychosomatics at the Hospital of Frankfurt Höchst; and MEDIAN "Klinik am Südpark" Bad Nauheim.

Correspondence concerning this article should be addressed to Ricarda Mewes, Division of Clinical Biopsychology, Department of Psychology at the University of Marburg, Gutenbergstrasse 18, 35032 Marburg, Germany. Tel.: +49-6421 282 4044, e-mail: mewesr@ uni-marburg.de

Cross-Cultural Validation Of The PHQ-9

Abstract

The Patient Health Questionnaire's depression module (PHQ-9) is a widely used screening tool to assess depressive disorders. However, cross-linguistic and cross-cultural validation of the PHQ-9 is mostly lacking. This study investigates whether scores on the German and Turkish versions of the PHQ-9 are comparable.

Data from Germans without a migration background (German version, n=1.670) and Turkish immigrants in Germany (either German or Turkish version, n=307) were used. Differential Item Functioning (DIF) was assessed using Item Response Theory models.

Several items of the PHQ-9 were found to exhibit DIF related to language or ethnicity, e.g. 'sleep problems', 'appetite changes' and 'anhedonia'. However, PHQ-9 sum scores were found to be unbiased, i.e., DIF had no notable impact on scale levels.

In conclusion, PHQ-9 sum scores can be compared between Turkish immigrants and Germans without a migration background without any adjustments, regardless of whether they complete the German or the Turkish version.

Keywords

Depression; Patient Health Questionnaire-9 (PHQ-9); Item Response Theory (IRT); Differential Item Functioning (DIF); cross-cultural / ethnic comparison; language versions (German, Turkish).

Cross-Cultural Validation Of The PHQ-9

Depression is a highly prevalent disorder leading to suffering and disability (Paykel, Brugha, & Fryers, 2005; Wittchen & Jacobi, 2005). It is predicted to be the major cause of burden of disease by 2020 (World Health Organization, 2001). Differences exist across countries and ethnic groups in epidemiology (Ayuso-Mateos et al., 2001; de Wit et al., 2008; González, Tarraf, Whitfield, Vega, & González, 2010; Hasin, Goodwin, Stinson, & Grant, 2005) and symptom presentation (Deisenhammer et al., 2011; Kirmayer & Young, 1998; Zayas & Gulbas, 2012) of depressive disorders. Many cross-cultural studies applied self-report questionnaires to assess and describe the phenomenology of depressive disorders. However, cross-linguistic and cross-cultural validation of self-report questionnaires is mostly lacking. Such validation analyses are urgently needed for a valid comparison of prevalence rates and symptom profiles of depressive disorders across linguistic and ethnic groups (Baas et al., 2011). Among self-report questionnaires for assessing depression, the Patient Health Questionnaire-9 (PHQ-9) (Kroenke, Spitzer, & Williams, 2001; Spitzer, Kroenke, & Williams, 1999) is one of the most frequently used and best validated questionnaires worldwide (Löwe, Kroenke, Herzog, & Gräfe, 2004; Löwe, Unützer, Callahan, Perkins, & Kroenke, 2004; Löwe, Spitzer, et al., 2004). It is recommended as a general measure of depression severity by the DSM-5 (American Psychiatric Association, 2013) and has been translated into over 70 languages and dialects (Pfizer Inc., 2013). In the present study, we investigate whether PHQ-9 scores are comparable between the German majority population without a migration background and the largest minority group in Germany, Turkish immigrants (German Federal Statistical Office, 2014).

To our knowledge, only three studies have investigated the comparability of different language versions of the PHQ-9: Huang and colleagues (2006) found differences in item functioning between the English and Chinese version of the items assessing sleep, appetite, and psychomotor changes in a large sample of primary care patients. Comparing the English and Spanish version, they also found differences in sleep and appetite items, plus anhedonia and self-esteem items. Arthurs and colleagues (2012) found differences between the English and French version for anhedonia, sleep, and self-esteem items in patients with systemic sclerosis. Comparing the German and Russian version in primary care patients (Hirsch, Donner-Banzhoff, & Bachmann, 2013), a difference in item functioning was found in the sleep problems item.

Cross-Cultural Validation Of The PHQ-9

Regarding the comparability across ethnic and racial groups, two studies have confirmed the comparability of the English version between African-American and non-Hispanic White primary care patients (Hepner, Morales, Hays, Edelen, & Miranda, 2008; Huang et al., 2006). Moreover, one study in a general population sample confirmed the comparability of the German version between Germans without a migration background and a heterogeneous sample of immigrants living in Germany (Mewes et al., 2010). However, Crane and colleagues found differences in items about sleep, low energy, and psychomotor changes between HIV-infected African-Americans and Whites in the English version (Crane et al., 2010), and Baas and colleagues confirmed a cultural bias in the Dutch version of the PHQ-9 in the item psychomotor changes between Surinam Dutch and Native Dutch male primary care patients (Baas et al., 2011). Although the reasons for differences in item functioning are mostly unclear, most studies confirmed that such differences had minimal impact on the scale level and that sum scores were mainly comparable across the investigated samples.

To establish cross-linguistic and cross-cultural measurement equivalence, equality in item functioning needs to be inspected. The probability of endorsing a specific item should be the same for all individuals with a certain underlying level of depression, and should not be influenced by ethnic or linguistic group. If these prerequisites are not fulfilled, the item is considered to have Differential Item Functioning (DIF, Camilli & Shepard, 1994; Holland & Wainer, 1993). The absence of DIF justifies cross-cultural comparisons based on the sum score as an indicator for the latent trait, and allows observed differences to be related to actual differences between groups. DIF can be appropriately assessed using Item Response Theory (IRT) analysis (Adler, Hetta, Isacsson, & Brodin, 2012; Reise & Waller, 2009). IRT provides parametric and nonparametric models, which constitute powerful tools for separating measurement bias from true group differences (Meijer & Baneke, 2004; Waller, Thompson, & Wenk, 2000).

The objective of this study is to investigate whether PHQ-9 scores are comparable between Turkish immigrants in Germany and Germans without a migration background. This is especially important since Turkish immigrants represent the largest minority group in Germany (German Federal Statistical Office, 2014), and are among the three largest immigrant populations in other European countries such as the Netherlands, Denmark, and Austria (Eurostat, 2011). Moreover, as prevalence

rates of affective disorders in labor migrants in Europe are elevated (Aichberger et al., 2010; de Wit et al., 2008; Lindert, Ehrenstein, Priebe, Mielck, & Brähler, 2009), properly working assessment instruments for depression are particularly important in this group.

First, we examine whether the German and Turkish language versions of the PHQ-9 are comparable. Then, we examine whether the German PHQ-9 is comparable across ethnic groups. This two-step approach is necessary because Turkish language utilization and German language proficiency vary considerably among Turkish immigrants (Weidacher, 2000). Based on previous studies on DIF in PHQ-9 items, one might expect DIF in the sleep, psychomotor changes, anhedonia, appetite changes, and low self-esteem items. However, this is the first study to investigate cross-linguistic and cross-cultural validity of the Turkish version of the PHQ-9, and one of the few to study this topic at all. Consequently, all items of the PHQ-9 were tested on DIF without statistical pre-assumptions. Based on the results, recommendations for applying the PHQ-9 in Turkish immigrants are provided.

Method

Data sources

This article provides secondary analyses of original data obtained in four independent, cross-sectional studies. The institutional review board of the German Psychological Association (study 1) and the institutional review board of the Department of Psychology, Marburg University, Germany (studies 2 to 4) reviewed and approved the study protocols. Participants of all studies provided written informed consent.

Study 1. A representative sample of the German general population (N = 2.510) was screened for disability, somatic complaints, mental health, and healthcare utilization. The assessment was conducted by an demographic consulting company (USUMA, Berlin) in 2007. The study material was available in German only. Details of the procedure are described elsewhere (e.g. Mewes et al., 2009). For the present analyses, only data of Germans without a migration background and of Turkish immigrants responding to the German language version of the PHQ-9 are used.

Study 2. A convenience sample of Turkish immigrants (N = 214) completed questionnaires about perceived discrimination and depressive and somatoform symptoms. Data were collected in 2011 and

2012 (Laskawi, 2012). The study material was provided in German or Turkish according to the participants' choice. The study was carried out using an online survey and paper-and-pencil versions with a snowball system.

Study 3. Two matched inpatient samples (Turkish immigrants vs. Germans without a migration background, $n = 50$ each) were recruited in five psychiatric clinics in 2011 and 2012 (Hanna Reich, Bockel, & Mewes, 2015). Participants were asked about subjective concepts of mental illness, motivation for psychotherapy, and mental health symptoms. The study material was provided as paper-and-pencil versions in German or Turkish according to the participants' choice. A bilingual research assistant helped illiterate participants.

Study 4. In a pilot study, Turkish immigrant inpatients ($N = 29$) were recruited to participate in a randomized controlled trial (RCT) on the effects of a motivation-enhancing program at the beginning of their inpatient treatment. They provided baseline information about motivation for psychotherapy, mental health symptoms, and illness perception at the beginning of inpatient treatment in two different psychiatric clinics in 2013 and 2014. Study material was available on a computer in German or Turkish according to the participants' choice. A bilingual research assistant helped participants who were illiterate or needed assistance with the computer. This sample was included to enclose Turkish immigrants with a low level of literacy in the analysis. Persons with low German language proficiency and low educational levels usually get excluded from research in Germany, but are characteristic for the population of Turkish immigrants (Woellert, Kröhnert, Sippel, & Klingholz, 2009).

Measures

Participants in all studies provided information on sociodemographic and migration-related variables, and symptoms of depression measured by the PHQ-9. The PHQ-9 is a nine-item self-rating instrument, with each item representing one of the DSM-IV criteria for a depressive episode (anhedonia, depressed mood, sleep problems, feeling tired, change in appetite, negative self-evaluation, concentration problems, psychomotor changes, suicidality). Each item can be scored as 0 (not at all), 1 (several days), 2 (more than half the days), or 3 (nearly every day), according to the frequency of experiencing difficulties in the respective area in the previous two weeks. Sum scores range from 0 to 27. Interpreting the PHQ-9 with respect to depression severity, a score of 5 to 9

represents mild depressive symptoms, 10 to 14 moderate depressive symptoms, and 15 to 27 severe depressive symptoms (Kroenke, Spitzer, Williams, & Löwe, 2010).

German and Turkish versions of the PHQ-9 were retrieved from the Pfizer Patient Health Questionnaire Screeners website (Pfizer Inc., 2013). The German version of the PHQ-9 (Löwe, Spitzer, Zipfel, & Herzog, 2002) was elaborated by several steps of translation and blind back-translation following state-of-the-art procedures for test translation (Bracken & Barona, 1991). Various studies have demonstrated its validity (Henkel et al., 2004; Löwe, Kroenke, et al., 2004; Löwe, Gräfe, et al., 2004; Löwe, Spitzer, et al., 2004; Martin, Rief, Klaiberg, & Braehler, 2006). Furthermore, results from the American and German PHQ validation studies are similar regarding criterion validity, construct validity, internal consistency, sensitivity to change and recommended cut-off scores (Kurt Kroenke et al., 2001; Löwe, Kroenke, et al., 2004; Löwe, Unützer, et al., 2004; Löwe, Spitzer, et al., 2004; Spitzer et al., 1999). Consequently, the German PHQ-9 can be considered a trustworthy and completely reliable PHQ version. However, to date, the Turkish version of the PHQ-9 (Çorapçıoğlu & Özer, n.d.) has been validated in only one study (Yazici Güleç, Güleç, Simşek, Turhan, & Aydin Sünbül, 2012), which showed acceptable results regarding reliability and validity for the Turkish population in Turkey.

Statistical procedure

Data preparation and definition of the subgroups. Overall, data of n = 2,853 participants were eligible from the four studies described above. N = 10 participants had more than two missing items in the PHQ-9 and were excluded from the present analysis. We selected three subgroups, differing in ethnicity (no migration background at all vs. Turkish migration background), and language version of the PHQ-9 (German vs. Turkish): Germans with no migration background completing the German version of the PHQ-9 (G-G), Turkish immigrants completing the German version of the PHQ-9 (T-G), and Turkish immigrants completing the Turkish version of the PHQ-9 (T-T). Ethnic groups were defined by the parents' country of birth according to Schenk et al. (2006). Persons were included only if both parents were born either in Germany or in Turkey. N = 334 participants were excluded based on this criterion. Non-migrants had to be born in Germany, i.e. have no immigration experience. Their mother tongue had to be German, and they had to hold a German passport. Based on these criteria, a

further $N = 5$ participants were excluded. The age range was restricted to 18-65 years, since there were no elderly participants in the T-T sample and only very few in the T-G sample. Accordingly, $N = 90$ participants under 18 and $N = 437$ participants over 65 were excluded. Final sample sizes were $N_{(G\text{-}G)} = 1.670$, $N_{(T\text{-}G)} = 191$, $N_{(T\text{-}T)} = 116$.

Dimensionality. IRT analyses require unidimensionality, i.e. the items should measure the symptoms of one underlying disorder. The PHQ-9 has been shown to be a one-dimensional measure of depression in previous studies (Cameron, Crawford, Lawton, & Reid, 2008; Crane et al., 2010; Dum, Pickren, Sobell, & Sobell, 2008; Hepner et al., 2008; Kocalevent, Hinz, & Brähler, 2013). However, as a special relevance of somatoform complaints in migrant populations in general (Castillo, Waitzkin, Ramirez, & Escobar, 1995; Kirmayer & Sartorius, 2007; Kirmayer & Young, 1998) and Turkish immigrants in particular (Behrens, Machleidt, Haltenhof, Ziegenbein, & Calliess, 2008; Mewes & Rief, 2009) has been discussed, a two-factor solution was also plausible. We addressed dimensionality using confirmatory factor analysis (CFA), testing a single-factor model and a two-factor model including the items 'sleep problems', 'low energy', 'appetite changes', and 'psychomotor changes' on a somatic factor and the items 'anhedonia', 'depressed mood', 'low self-esteem', 'concentration difficulties', 'and suicidal ideation' on a cognitive-affective factor. Dimensionality of the PHQ-9 was inspected for all three subgroups separately and for the total sample. Missing values were handled with full-information maximum likelihood estimation ($N_{\text{one missing (G-G)}} = 10$; $N_{\text{two missings (G-G)}} = 0$; $N_{\text{one missing (T-G)}} = 4$; $N_{\text{two missings (T-G)}} = 1$; $N_{\text{one missing (T-T)}} = 2$; $N_{\text{two missings (T-T)}} = 0$). For model fit comparison, we followed a procedure which involves comparing the change in goodness-of-fit indices, which are unaffected by sample size (Cheung & Rensvold, 2002). Following Cheung's recommendations, we compared the CFI between the single-factor and the two-factor models, with a difference of < 0.01 indicating substantively similar models (Cheung & Rensvold, 2002). Mplus version 5 was used for CFA (Muthén & Muthén, n.d.).

Item Response Theory (IRT) analyses. For IRT analyses, the parametric graded-response model (GRM) (Samejima, 1969, 1996), the polytomous extension of the two-parameter logistic model, was applied. The GRM estimates two types of item parameters and one person parameter, based on the pattern of responses observed in the data. The item parameters are: item slope *a*, and item location *b*.

The item slope parameter *a* indicates how steeply the probability of endorsing an item increases with an increasing underlying level of depression. The person parameter theta (θ) estimates the underlying level of depression. The item location parameters *b* indicate the positions of the thresholds from one response category to another. The *b* parameters represent the trait level necessary to respond above the threshold with .50 probability (Embretson & Reise, 2013). In the case of the PHQ-9, there are three thresholds: from 'not at all' to 'several days' (b_1), from 'several days' to 'more than half the days' (b_2), and from 'more than half the days' to 'nearly every day' (b_3). Item parameters can be interpreted as a z scale (mean = 0, standard deviation = 1). All parameters estimated by the GRM are reported on a logit scale. Item Characteristic Curves (ICCs) were used for the graphical investigation of the operation characteristics. The form of an ICC describes how changes in trait level relate to changes in the probability of a specified response. For polytomous items, the ICC regresses the probability of responses in each category on trait level (Embretson & Reise, 2013).

For Differential Item Functioning (DIF), our analyses disentangle differences in item functioning related to language (German vs. Turkish) and to ethnicity and migration background (Germans without a migration background vs. Turkish migration background). The first analysis investigated DIF related to language, comparing T-G and T-T. The second investigated DIF related to ethnicity and migration background, comparing T-G to G-G. DIF analyses were conducted in two steps: first selecting anchor items, and then evaluating candidate items for DIF. Anchor items allow responses from two groups to be linked so that parameters are estimated in a common metric (Embretson & Reise, 2013). Since we had no a priori information about DIF-free items in our samples, we used an iterative process to identify anchor items to be used for evaluating DIF in candidate items. We adopted the "leave-one-out" approach for the selection of anchor items, i.e. every single item was tested for DIF, assuming that the remaining items were DIF-free and thus serving as anchor items. If any of the X^2 tests for an item was significant at the $p < .05$ level, the item was considered to be a candidate DIF item. This process was repeated with the remaining items to purify the sample of anchor items until there were no more new candidate DIF items in the next analysis. In the second stage of analysis, the candidate DIF items were tested for DIF relative to the set of anchor items that had been identified in step one.

Finally, Test Characteristic Curves (TCC) and Test Information Curves (TIC) were inspected. The TCC plots the most likely standard PHQ-9 score associated with each level of depression (Crane et al., 2010). The TIC plots the information at each depression level, e.g. the measurement precision at each depression level and the standard error associated which each depression level. Where the TCC is steep and test information is high, the PHQ-9 has good measurement precision and a small standard error of measurement. All IRT analyses were computed with IRTPRO 2.1 for Windows (Cai, Thissen, & du Toit, 2014).

Results

Sample characteristics

A final sample of n=1,977 participants was analyzed. The mean age of the total sample was 42.6 years, with T-G being significantly younger (32.6 vs. 43.7 years, see Table 1). In the total sample, 97% of participants had completed nine or more years of education, and 61% were employed. However, only 82% of T-T had completed nine years of education or beyond, and the employment rate was only 47%. The proportion of inpatients was markedly higher in T-T (57%) than in the other subgroups (3% and 5%). Moreover, the proportion of participants with moderate or severe depression as estimated by the PHQ-9 sum score was higher among T-T. Second-generation immigrants were more likely to be in the T-G subgroup (62% vs. 10%). T-G were also more likely to indicate German as their mother tongue (17% vs. 6%) and to have a better German language proficiency, if their mother tongue was Turkish.

-- Insert Table 1 here --

Dimensionality

The single-factor model showed good fit in each subgroup and for the entire sample (G-G: $X^2(27) = 521.6$, $p < .001$; CFI = .938; RMSEA [90% C.I.] =.105 [.097; .113]. T-G: $X^2(27) = 67.4$, $p < .001$; CFI = .955; RMSEA [90% C.I.] =.089 [.062; .115]. T-T: $X^2(27) = 22.0$, $p > .05$; CFI = 1.0; RMSEA [90% C.I.] =.000 [.000; .057]. Total: $X^2(27) = 454.6$, $p < .001$; CFI =.964; RMSEA [90% C.I.] =.090 [.082; .097]). The fit of the two-factor model was similarly good in all subgroups and in the entire sample (G-G: $X^2(26) = 488.5$, $p < .001$; CFI =.942; RMSEA [90% C.I.] =.103 [.095; .111]. T-G:

$X^2(26) = 58.0$, $p < .001$; CFI = .964; RMSEA [90% C.I.] = .080 [.052; .108]. T-T: $X^2(26) = 21.5$, $p > .05$; CFI = 1.0; RMSEA [90% C.I.] = .000 [.000; .057]. Total: $X^2(26) = 422.4$, $p < .001$; CFI = .967; RMSEA [90% C.I.] = .088 [.081; .095]). Consequently, the more parsimonious single-factor model was preferred.

IRT parameter estimates and inspection of ICCs

The item slope parameters *a* ranged from 1.45 to 4.16, indicating that the response categories differentiated among trait levels fairly well (Table 2). The ascending order of the item location parameters b_1, b_2, and b_3 confirmed the correct order of response options. Additionally, the range of the item location parameters indicated that the PHQ-9 items covered levels of depression from about 1 standard deviation below to 2 standard deviations above the sample population mean.

-- Insert Table 2 here --

The graphical inspection of the ICCs (Figure 1) showed that all PHQ-9 items work well in our samples. Peaks of RCCs for response options 2 and 3 (and for 'psychomotor changes' and 'suicidal ideation' also response option 1) corresponded to underlying depression levels well above the population mean. Most RCCs had their own peak where the respective response option was the most likely to be endorsed. However, in various items and especially in the T-T sample (Figure 1, right column), response option 2 'more than half the days' did not offer much additional information, since the area under its RCC which is covered in addition to the adjacent RCCs is small or non-existent.

– Insert Figure 1 here --

DIF related to language

In the first step, we identified five DIF-free items (items 2, 6-9, see Table 3). These items served as anchor items for evaluating DIF in the remaining items. Statistically significant DIF regarding item slope was identified in the item 'anhedonia'. The probability of endorsing this item with increasing level of depression increased more rapidly in T-G than in T-T. Significant DIF was found for the location parameters of the items 'sleep problems', 'low energy', and 'appetite changes'. While the locations of the first threshold (b_1: 'not at all' to 'several days') were similar in both subgroups, the locations of the thresholds b_2 and b_3 differed: b_2 was lower in T-G for all items, while

b_3 was higher in T-G in items 3 and 4, and higher in T-T in item 5 (see Table 2). Estimating group parameters with DIF-free items only, the group estimate of the latent depression factor was 1.03 standard deviations higher in T-T than in T-G. Using all items, it was 1.04 standard deviations higher in T-T than in T-G. In summary, language-related DIF is present in four items, but the impact on the scale level is minimal.

-- Insert Table 3 here --

DIF related to ethnicity and migration background

In the first step, we identified seven DIF-free items (items 1-4, 6, 8-9, see Table 3), which served as anchor items. The items 'appetite changes' and 'concentration difficulties' were evaluated for DIF in the second stage of analysis. While the threshold b_1 was similar for both groups, the thresholds b_2 and b_3 were shifted upwards for G-G as compared to T-G. For G-G, the probability of endorsing item 7 increased more rapidly with rising underlying level of depression than for T-G. Estimating group parameters with DIF-free items only, the mean depression level was 1 standard deviation higher in T-G than in G-G. Based on IRT estimates of depression using all items, the group estimate was identical: There was no impact of DIF related to ethnicity and migration background on the scale level.

Test characteristics and test information

TCCs (Figure 2, left column) showed that the expected PHQ-9 score is about 6 to 9 points at the mean level of depression in our samples (theta = 0). The PHQ-9 had curvilinear scaling properties in all three subgroups. Consequently, differences between standard scores have different implications depending on the starting score. For example, a reduction in the underlying level of depression of 1.5 standard deviations in G-G was represented by 13.5 points in the PHQ-9 starting from theta = 1.5, and by 7.5 points starting from theta = 0.

Inspecting TICs (Figure 2, right column), we learned that the PHQ-9 offers good measurement precision (i.e. small standard errors) from about 1 standard deviation below the population mean to about 2.5 standard deviations above. Accordingly, Cronbach's alpha was .90 for T-T and G-G, and .91 for T-G.

– Insert Figure 2 here --

Discussion

The scope of the present study was to examine whether the Turkish and German versions of the PHQ-9 provide cross-linguistic and cross-cultural validity. The German version is comparable to the English and is equally well validated. We applied IRT analyses to three samples which differed regarding language version and ethnicity.

Comparability of language versions

The PHQ-9 sum score was comparable between German and Turkish language versions. Although there was item level bias, this was not reflected in total scores. This could be due to cancelling out of opposite item level DIF, or the limited effect of item level DIF at low to average range of the scale where most subjects were located. Consequently, differences between mean scores can be attributed to real differences between subgroups. In our analyses, the T-T sample included a higher proportion of inpatients and severely depressed participants, which is reflected in a meaningful difference between T-G and T-T in the latent depression factor. These differences reflect true differences in depression severity instead of measurement bias. In line with other studies comparing different language versions of the PHQ-9, we found DIF for the item 'sleep problems' (Arthurs et al., 2012; Hirsch et al., 2013; Huang et al., 2006). However, studies on the cross-linguistic validity of the CES-D in English- and Dutch-speaking patients with systemic sclerosis (Kwakkenbos et al., 2013) and the BDI in English- and Spanish-speaking outpatients (Azocar, Areán, Miranda, & Muñoz, 2001) found no DIF for the corresponding sleep items. In conclusion, the bias in the sleep item seems to be based in the PHQ-9 item formulation itself rather than in the symptom of sleep problems across cultures. Language-related DIF for the items 'appetite changes' and 'anhedonia' were also found in other studies (Arthurs et al., 2012; Huang et al., 2006), and was possibly related to the PHQ-9 response options in our study: 'More than half the days' was barely used by Turkish immigrants, especially when completing the Turkish version. One recent study on the Spanish version of the PHQ-9 also reported problems with PHQ-9 response categories (Zhong, Gelaye, Fann, Sanchez, & Williams, 2014). Collapsing the response categories 'more than half the days' and 'nearly every day'

and working with a three-point Likert scale improved cross-cultural psychometric characteristics of the PHQ-9 in the study of Zhong and colleagues.

Comparability across ethnic groups

Our finding that PHQ-9 sum scores are comparable between Germans without a migration background and Turkish immigrants in Germany without any restrictions concurs with previous studies addressing the utilization of the PHQ-9 in culturally diverse populations (Baas et al., 2011; Crane et al., 2010; Hepner et al., 2008; Huang et al., 2006; Mewes et al., 2010). Higher PHQ-9 sum scores in the T-G than in the G-G sample might be explained by self-selection processes resulting in more T-G with clinical signs of depression participating in study 2 compared to the mainly representative G-G sample from study 1. In contrast to previous studies (Baas et al., 2011; Crane et al., 2010), we found DIF for the items 'appetite changes' and 'concentration difficulties'. The differences manifested in a lower threshold for T-G to endorse the clinically meaningful response categories 'more than half the days' and 'nearly every day'.

General characteristics

The PHQ-9 items covered a wide range of depression severities, and the PHQ-9 had a very good measurement precision around and above the population mean of depression. Our findings regarding these general characteristics of the PHQ-9 concur with previous research demonstrating the high quality of this depression questionnaire (Kroenke et al., 2010; Martin et al., 2006). However, differences between means (as used in longitudinal studies or for documenting the course of therapy) should be interpreted with caution due to curvilinear scaling properties. A rapid initial improvement in PHQ-9 sum scores, especially in severely depressed patients, may not correspond to an equally strong improvement in underlying depression.

Strengths and limitations

The strengths of our study are that we applied a state-of-the-art statistical approach, i.e., Item Response Theory, and used relatively large samples including a broad spectrum of depression severities. We evaluated the psychometric characteristics of two PHQ-9 language versions in-depth for application in culturally diverse populations. Nonetheless, there are some limitations to our study. Our

analyses only included people with a Turkish migration background or no migration background at all. Further differentiations between the influences of migration background and ethnicity (i.e. Turkish immigrants living in Germany vs. Turkish people living in Turkey) are lacking. The sample without a migration background might encompass any data of repatriated Russian Germans, since they are not classified as migrants in official statistics. The presented results might be biased due to sociodemographic differences between the samples. Regarding gender, some studies report no or only a minor influence of gender on PHQ-9 scores (Cameron, Crawford, Lawton, & Reid, 2013; Thibodeau & Asmundson, 2014), while others report a significant influence (Kocalevent et al., 2013). However, none of these studies investigated Turkish immigrants. We did not adjust for sample differences in age, education, and employment, since these variables are not independent of the groups examined here: The T-G sample was substantially younger than the other groups, as more second- than first-generation Turkish immigrants chose to respond to questionnaires in German. DIF related to age has been reported for items 1, 2, and 4 in a UK sample (Cameron et al., 2013), which might have influenced the results of our analyses. Among Turkish immigrants, the proportion of persons with only basic education or who are unemployed is greater than in the German general population (German Federal Statistical Office, 2014). According to Cameron et al. (2013), the PHQ-9 is free of DIF related to education. The proportion of seriously ill persons in the samples might have affected analyses through sampling bias, as the proportion was higher in the Turkish immigrant samples. Furthermore, as no gold standard measure of depression was included in the original studies, we were unable to compare sensitivity and specificity for each of our samples. The addition of a gold standard would have resulted in a more sophisticated understanding of the implications of our findings for the accuracy of diagnostic recommendations of the PHQ-9. We did not test whether DIF had a consistent impact across levels of depression severity (uniform DIF) or whether the impact of DIF varied by symptom level (nonuniform DIF). Finally, the original studies rely on different settings and study designs, implying that data from different sources might not be fully comparable.

Implications for future research or clinical practice

Based on the main findings of the present study, the PHQ-9 can be recommended as a cross-cultural and cross-linguistic valid screening tool for depression in Germans without a migration

background and Turkish immigrants, regardless of whether they complete the Turkish or the German version. These results might be transferable to the comparability with the English version. When interpreting individual scores of Turkish immigrants in clinical practice or in comparative studies, the response categories 'more than half the days' and 'nearly every day' should both be considered as clinically meaningful responses, as suggested by the categorical algorithm for the diagnosis of depressive disorder according to DSM-IV (Spitzer et al., 1999). According to our results, both response options should be regarded as equally important. Further analysis may evaluate whether both response options are necessary or whether they can be collapsed into one. Furthermore, Turkish immigrants seemed to be more willing to endorse some of the PHQ-9 items. Consequently, there might be intercultural differences in the perception or expression of depression (Deisenhammer et al., 2011). External or relational bias (Drasgow, 1987) with respect to second variables (e.g. symptom expression) may exist. Any ensuing differences in the predictive validity of the PHQ-9 (Embretson & Reise, 2013) might be subject of further research. In summary, the PHQ-9 can be highly recommended as a cross-cultural and cross-linguistic valid depression screener for the investigated samples.

References

Adler, M., Hetta, J., Isacsson, G., & Brodin, U. (2012). An item response theory evaluation of three depression assessment instruments in a clinical sample. *BMC Medical Research Methodology*, *12*, 84. http://doi.org/10.1186/1471-2288-12-84

Aichberger, M. C., Schouler-Ocak, M., Mundt, A., Busch, M. A., Nickels, E., Heimann, H. M., … Rapp, M. A. (2010). Depression in middle-aged and older first generation migrants in Europe: results from the Survey of Health, Ageing and Retirement in Europe (SHARE). *European Psychiatry*, *25*(8), 468–475. http://doi.org/10.1016/j.eurpsy.2009.11.009

American Psychiatric Association, [APA]. (2013). Diagnostic and statistical manual of mental disorders, DSM-5. Arlington, VA: American Psychiatric Publishing.

Arthurs, E., Steele, R. J., Hudson, M., Baron, M., & Thombs, B. D. (2012). Are scores on English and French versions of the PHQ-9 comparable? An assessment of differential item functioning. *PloS One*, *7*(12), e52028. http://doi.org/10.1371/journal.pone.0052028

Ayuso-Mateos, J. L., Vázquez-Barquero, J. L., Dowrick, C., Lehtinen, V., Dalgard, O. S., Casey, P., … Wilkinson, G. (2001). Depressive disorders in Europe: prevalence figures from the ODIN study. *The British Journal of Psychiatry*, *179*, 308–16. Retrieved from http://www.ncbi.nlm.nih.gov/pubmed/11581110

Azocar, F., Areán, P., Miranda, J., & Muñoz, R. F. (2001). Differential item functioning in a Spanish translation of the Beck Depression Inventory. *Journal of Clinical Psychology*, *57*(3), 355–65. Retrieved from http://www.ncbi.nlm.nih.gov/pubmed/11241365

Baas, K. D., Cramer, A. O. J., Koeter, M. W. J., van de Lisdonk, E. H., van Weert, H. C., & Schene, A. H. (2011). Measurement invariance with respect to ethnicity of the Patient Health Questionnaire-9 (PHQ-9). *Journal of Affective Disorders*, *129*(1-3), 229–35. http://doi.org/10.1016/j.jad.2010.08.026

Behrens, K., Machleidt, W., Haltenhof, H., Ziegenbein, M., & Calliess, I. T. (2008). Somatization and vulnerability to offence in immigrants with mental disorders - evidence or eminence? *Nervenheilkunde*, *27*, 639–643.

Bracken, B. a., & Barona, a. (1991). State of the Art Procedures for Translating, Validating and Using Psychoeducational Tests in Cross-Cultural Assessment. *School Psychology International*, *12*(1-2), 119–132. http://doi.org/10.1177/0143034391121010

Cai, L., Thissen, D., & du Toit, S. H. C. (2014). IRTPRO 2.1 for Windows (Item Response Theory for Patient-Reported Outcomes). Lincolnwood, IL: Scientific Software International.

Cameron, I. M., Crawford, J. R., Lawton, K., & Reid, I. C. (2008). Psychometric comparison of PHQ-9 and HADS for measuring depression severity in primary care. *The British Journal of General Practice*, *58*(546), 32–6. http://doi.org/10.3399/bjgp08X263794

Cameron, I. M., Crawford, J. R., Lawton, K., & Reid, I. C. (2013). Differential item functioning of the HADS and PHQ-9: An investigation of age, gender and educational background in a clinical UK primary care sample. *Journal of Affective Disorders*, *147*, 262–8. http://doi.org/10.1016/j.jad.2012.11.015

Cross-Cultural Validation Of The PHQ-9

Camilli, G., & Shepard, L. (1994). *Methods for Identifying Biased Test Items*. Thousand Oaks: Sage Publications.

Castillo, R., Waitzkin, H., Ramirez, Y., & Escobar, J. I. (1995). Somatization in Primary Care, With a Focus on Immigrants and Refugees. *Archives of Family Medicine*, *4*(7), 637–646.

Cheung, G. W., & Rensvold, R. B. (2002). Evaluating Goodness-of- Fit Indexes for Testing Measurement Invariance. *Structural Equation Modeling*, *2*(2), 233–255. http://doi.org/10.1207/S15328007SEM0902

Çorapçıoğlu, A., & Özer, G. U. (n.d.). Hasta sağlık anketi - 9 [Patient Health Questionnaire-9]. Retrieved from http://www.phqscreeners.com/pdfs/02_PHQ-9/PHQ9_Turkish for Turkey.pdf

Crane, P. K., Gibbons, L. E., Willig, J. H., Mugavero, M. J., Lawrence, S. T., Schumacher, J. E., … Crane, H. M. (2010). Measuring depression levels in HIV-infected patients as part of routine clinical care using the nine-item Patient Health Questionnaire (PHQ-9). *AIDS Care*, *22*(7), 874–85. http://doi.org/10.1080/09540120903483034

De Wit, M. A. S., Tuinebreijer, W. C., Dekker, J., Beekman, A. J. T. F., Gorissen, W. H. M., Schrier, A. C., … Verhoeff, A. P. (2008). Depressive and anxiety disorders in different ethnic groups: a population based study among native Dutch, and Turkish, Moroccan and Surinamese migrants in Amsterdam. *Social Psychiatry and Psychiatric Epidemiology*, *43*(11), 905–912. http://doi.org/10.1007/s00127-008-0382-5

Deisenhammer, E. a, Coban-Başaran, M., Mantar, A., Prunnlechner, R., Kemmler, G., Alkın, T., & Hinterhuber, H. (2011). Ethnic and migrational impact on the clinical manifestation of depression. *Social Psychiatry and Psychiatric Epidemiology*. http://doi.org/10.1007/s00127-011-0417-1

Drasgow, F. (1987). Study of the measurement bias of two standardized psychological tests. *Journal of Applied Psychology*, *72*(1), 19–29. http://doi.org/10.1037/0021-9010.72.1.19

Dum, M., Pickren, J., Sobell, L. C., & Sobell, M. B. (2008). Comparing the BDI-II and the PHQ-9 with outpatient substance abusers. *Addictive Behaviors*, *33*(2), 381–7. http://doi.org/10.1016/j.addbeh.2007.09.017

Embretson, S., & Reise, S. (2013). *Item response theory for psychologists*. Hove, UK: Psychology Press.

Eurostat. (2011). *Migrants in Europe: A statistical portrait of the first and second generation*. Luxembourg: European Union. http://doi.org/10.2785/5318

German Federal Statistical Office. (2014). *[Population and employment. Population with migration background - results of the microcensus 2013]*. Wiesbaden: Statistisches Bundesamt.

González, H. M., Tarraf, W., Whitfield, K. E., Vega, W. W. a, & González, H. M. H. (2010). The epidemiology of major depression and ethnicity in the United States. *Journal of Psychiatric Research*, *44*(15), 1043–1051. http://doi.org/10.1016/j.jpsychires.2010.03.017

Hasin, D., Goodwin, R., Stinson, F., & Grant, B. (2005). Epidemiology of major depressive disorder. *Archives of General Psychiatry*, *62*, 1097–1106.

Henkel, V., Mergl, R., Kohnen, R., Allgaier, A.-K., Möller, H.-J., & Hegerl, U. (2004). Use of brief depression screening tools in primary care: consideration of heterogeneity in performance in

different patient groups. *General Hospital Psychiatry*, *26*(3), 190–8. http://doi.org/10.1016/j.genhosppsych.2004.02.003

Hepner, K. a, Morales, L. S., Hays, R. D., Edelen, M. O., & Miranda, J. (2008). Evaluating differential item functioning of the PRIME-MD mood module among impoverished black and white women in primary care. *Women's Health Issues*, *18*(1), 53–61. http://doi.org/10.1016/j.whi.2007.10.001

Hirsch, O., Donner-Banzhoff, N., & Bachmann, V. (2013). Measurement Equivalence of Four Psychological Questionnaires in Native-Born Germans, Russian-Speaking Immigrants, and Native-Born Russians. *Journal of Transcultural Nursing*. http://doi.org/10.1177/1043659613482003

Holland, P., & Wainer, H. (1993). *Differential Item Functioning*. Hillsdale (NJ): Lawrence Erlbaum Associates.

Huang, F. Y., Chung, H., Kroenke, K., Delucchi, K. L., & Spitzer, R. L. (2006). Using the Patient Health Questionnaire-9 to measure depression among racially and ethnically diverse primary care patients. *Journal of General Internal Medicine*, *21*(6), 547–52. http://doi.org/10.1111/j.1525-1497.2006.00409.x

Kirmayer, L. J., & Sartorius, N. (2007). Cultural models and somatic syndromes. *Psychosomatic Medicine*, *69*(9), 832–840. http://doi.org/10.1097/PSY.0b013e31815b002c

Kirmayer, L. J., & Young, A. (1998). Culture and somatization: clinical, epidemiological, and ethnographic perspectives. *Psychosomatic Medicine*, *60*(4), 420–30. Retrieved from http://www.ncbi.nlm.nih.gov/pubmed/9710287

Kocalevent, R.-D., Hinz, A., & Brähler, E. (2013). Standardization of the depression screener patient health questionnaire (PHQ-9) in the general population. *General Hospital Psychiatry*, *35*(5), 551–5. http://doi.org/10.1016/j.genhosppsych.2013.04.006

Kroenke, K., Spitzer, R. L., & Williams, J. B. (2001). The PHQ-9: validity of a brief depression severity measure. *Journal of General Internal Medicine*, *16*(9), 606–13. Retrieved from http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=1495268&tool=pmcentrez&rendertype=abstract

Kroenke, K., Spitzer, R., Williams, J., & Löwe, B. (2010). The Patient Health Questionnaire somatic, anxiety, and depressive symptom scales: a systematic review. *Psychiatry and Primary Care*, *32*(4), 345–359.

Kwakkenbos, L., Arthurs, E., van den Hoogen, F. H. J., Hudson, M., van Lankveld, W. G. J. M., Baron, M., … Thombs, B. D. (2013). Cross-language measurement equivalence of the Center for Epidemiologic Studies Depression (CES-D) scale in systemic sclerosis: a comparison of Canadian and Dutch patients. *PloS One*, *8*(1), e53923. http://doi.org/10.1371/journal.pone.0053923

Laskawi, J. (2012). [Almanya - Welcome to Germany! Or not? Relationships between perceived discrimination and psychological health in people with a Turkish migration background] (diploma thesis). University of Marburg, Germany. Marburg, Germany: University of Marburg.

Lindert, J., Ehrenstein, O. S. Von, Priebe, S., Mielck, A., & Brähler, E. (2009). Depression and anxiety in labor migrants and refugees - a systematic review and meta-analysis. *Social Science & Medicine*, *69*(2), 246–57. http://doi.org/10.1016/j.socscimed.2009.04.032

Cross-Cultural Validation Of The PHQ-9

Löwe, B., Gräfe, K., Zipfel, S., Witte, S., Loerch, B., & Herzog, W. (2004). Diagnosing ICD-10 depressive episodes: superior criterion validity of the Patient Health Questionnaire. *Psychotherapy and Psychosomatics*, *73*(6), 386–90. http://doi.org/10.1159/000080393

Löwe, B., Kroenke, K., Herzog, W., & Gräfe, K. (2004). Measuring depression outcome with a brief self-report instrument: sensitivity to change of the Patient Health Questionnaire (PHQ-9). *Journal of Affective Disorders*, *81*(1), 61–6. http://doi.org/10.1016/S0165-0327(03)00198-8

Löwe, B., Spitzer, R., Gräfe, K., Kroenke, K., Quenter, A., Zipfel, S., … Herzog, W. (2004). Comparative validity of three screening questionnaires for DSM-IV depressive disorders and physicians' diagnoses. *Journal of Affective Disorders*, *78*(2), 131–140. http://doi.org/10.1016/S0165-0327(02)00237-9

Löwe, B., Spitzer, R. L., Zipfel, S., & Herzog, W. (2002). *Gesundheitsfragebogen fur Patienten (PHQ-D) Manual und Testunterlagen: 2. Auflage [PRIME MD Patient Health Questionnaire (PHQ) — German version Manual and materials: 2nd edition]*. Karlsruhe, Germany: Pfizer.

Löwe, B., Unützer, J., Callahan, C., Perkins, A., & Kroenke, K. (2004). Monitoring depression treatment outcomes with the patient health questionnaire-9. *Medical Care*, *42*(12), 1194–1201. Retrieved from http://journals.lww.com/lww-medicalcare/Abstract/2004/12000/Monitoring_Depression_Treatment_Outcomes_With_the.6.aspx

Martin, A., Rief, W., Klaiberg, A., & Braehler, E. (2006). Validity of the Brief Patient Health Questionnaire Mood Scale (PHQ-9) in the general population. *General Hospital Psychiatry*, *28*(1), 71–7. http://doi.org/10.1016/j.genhosppsych.2005.07.003

Meijer, R. R., & Baneke, J. J. (2004). Analyzing psychopathology items: a case for nonparametric item response theory modeling. *Psychological Methods*, *9*(3), 354–68. http://doi.org/10.1037/1082-989X.9.3.354

Mewes, R., Christ, O., Rief, W., Brähler, E., Martin, A., & Glaesmer, H. (2010). Are depression and somatisation equivalent for migrants and native Germans? An investigation of measurement invariance for the PHQ-9 and PHQ-15. *Diagnostica*, *56*(4), 230–239. http://doi.org/10.1026/0012-1924/a000026

Mewes, R., & Rief, W. (2009). Are somatoform complaints and causal attributions in Turkish migrants associated with their cultural background or the migration itself? *Zeitschrift Für Medizinische Psychologie*, *18*, 135–139. Retrieved from http://iospress.metapress.com/index/D257V35723160145.pdf

Mewes, R., Rief, W., Stenzel, N., Glaesmer, H., Martin, A., & Brähler, E. (2009). What is "normal" disability? An investigation of disability in the general population. *Pain*, *142*(1-2), 36–41. http://doi.org/10.1016/j.pain.2008.11.007

Muthén, L., & Muthén, B. (n.d.). Mplus User's guide. Los Angeles, CA.

Paykel, E. S., Brugha, T., & Fryers, T. (2005). Size and burden of depressive disorders in Europe. *European Neuropsychopharmacology*, *15*(4), 411–23. http://doi.org/10.1016/j.euroneuro.2005.04.008

Pfizer Inc. (2013). Patient Health Questionnaires (PHQ) Screeners, official website. Retrieved from http://www.phqscreeners.com/overview.aspx?Screener=02_PHQ-9

Reich, H., Bockel, L., & Mewes, R. (2015). Motivation for psychotherapy and illness beliefs in Turkish immigrant inpatients in Germany: Results of a cultural comparison study. *Journal of Racial and Ethnic Health Disparities*, *2*(1), 112–123. http://doi.org/10.1007/s40615-014-0054-y

Reich, H., Bockel, L., & Mewes, R. (2015). Motivation for psychotherapy and illness beliefs in Turkish immigrant inpatients in Germany: Results of a cultural comparison study. *Journal of Racial and Ethnic Health Disparities*, *2*(1), 112–123. http://doi.org/10.1007/s40615-014-0054-y

Reise, S. P., & Waller, N. G. (2009). Item response theory and clinical measurement. *Annual Review of Clinical Psychology*, *5*, 27–48. http://doi.org/10.1146/annurev.clinpsy.032408.153553

Samejima, F. (1969). Estimation of latent ability using a response pattern of graded scores. *Psychometric Monograph Np. 17*. Richmond, VA. http://doi.org/10.1007/BF02290599

Samejima, F. (1996). The graded response model. In W. J. van der Linden & R. K. Hambleton (Eds.), *Handbook of modern item response theory*. New York: Springer.

Schenk, L., Bau, A. M., Borde, T., Butler, J., Lampert, T., Neuhauser, H., … Weilandt, C. (2006). Mindestindikatorensatz zur Erfassung des Migrationsstatus [Minimum set of indicators for measuring the migration status]. *Bundesgesundheitsblatt - Gesundheitsforschung - Gesundheitsschutz*, *49*(9), 853–860.

Spitzer, R., Kroenke, K., & Williams, J. (1999). Validation and utility of a self-report version of PRIME- MD: The PHQ Primary Care Study. *JAMA*, *282*(18), 1737–1744.

Thibodeau, M. A., & Asmundson, G. J. G. (2014). The PHQ-9 assesses depression similarly in men and women from the general population. *Personality and Individual Differences*, *56*, 149–153. http://doi.org/10.1016/j.paid.2013.08.039

Waller, N. G., Thompson, J. S., & Wenk, E. (2000). Using IRT to separate measurement bias from true group differences on homogeneous and heterogeneous scales: An illustration with the MMPI. *Psychological Methods*, *5*(1), 125–146. http://doi.org/10.1037//1082-989X.5.1.125

Weidacher, A. (2000). Schlußfolgerungen und partizipationspolitischer Ausblick [Conclusions and political forecast]. In A. Weidacher (Ed.), *In Deutschland zu Hause: politische Orientierungen griechischer, italienischer, türkischer und deutscher junger Erwachsener im Vergleich (DJI-Ausländersurvey) [At home in Germany: a comparison of political orientations in Greek, Italian, Turkish and Germa* (pp. 265–272). Opladen: Leske + Budrich.

Wittchen, H.-U., & Jacobi, F. (2005). Size and burden of mental disorders in Europe - a critical review and appraisal of 27 studies. *European Neuropsychopharmacology*, *15*(4), 357–76. http://doi.org/10.1016/j.euroneuro.2005.04.012

Woellert, F., Kröhnert, S., Sippel, L., & Klingholz, R. (2009). *Ungenutzte Potenziale: Zur Lage der Integration in Deutschland*. Berlin-Institut für Bevölkerung und Entwicklung. http://doi.org/10.1007/978-3-531-19010-5_8

World Health Organization, [WHO]. (2001). The world health report: Mental health: New understanding and hope. Geneva: World Health Organization.

Yazici Güleç, M., Güleç, H., Simşek, G., Turhan, M., & Aydin Sünbül, E. (2012). Psychometric properties of the Turkish version of the Patient Health Questionnaire-Somatic, Anxiety, and Depressive Symptoms. *Comprehensive Psychiatry*, *53*(5), 623–9. http://doi.org/10.1016/j.comppsych.2011.08.002

Cross-Cultural Validation Of The PHQ-9

Zayas, L. H., & Gulbas, L. E. (2012). Are suicide attempts by young Latinas a cultural idiom of distress? *Transcultural Psychiatry*. http://doi.org/10.1177/1363461512463262

Zhong, Q., Gelaye, B., Fann, J. R., Sanchez, S. E., & Williams, M. a. (2014). Cross-cultural validity of the Spanish version of PHQ-9 among pregnant Peruvian women: a Rasch item response theory analysis. *Journal of Affective Disorders*, *158*, 148–53. http://doi.org/10.1016/j.jad.2014.02.012

22

Cross-Cultural Validation Of The PHQ-9

Table 1

Sample description stratified by language and ethnicity.

	G-G (*N* = 1.670)	T-G (*N* = 191)	T-T (*N* = 116)	Total (*n* = 1.977)	Test statistic
Sociodemographic characteristics					
Age in years, *mean (SD)*	43.7 (12.7)	32.6 (9.9)	43.7 (11.1)	42.6 (12.8)	F (2) = 70.2***
Female sex, *n (%)*	930 (55.7)	109 (57.4)	71 (61.2)	1.110 (56.2)	X^2 (2) = 1.5*
Education ≥ 9 years, *n (%)*[a]	1.638 (98.2)	181 (96.3)	94 (82.4)	1.913 (97.1)	X^2 (2) = 157.8***
Being employed, *n (%)*[b]	1.037 (62.1)	118 (62.4)	54 (46.6)	1.209 (61.2)	X^2 (2) = 11.1**
Clinical characteristics					
Being in inpatient treatment, *n (%)*	49 (2.9)	9 (4.7)	66 (56.9)	124 (6.3)	X^2 (2) = 538.1***
PHQ-9 total score, *mean (SD)*	2.6 (3.9)	7.2 (6.3)	13.6 (7.3)	3.7 (5.3)	F (2) = 397.5***
Depression severity as defined by the PHQ-9					
None (0-4), *n (%)*	1.360 (81.4)	73 (38.2)	12 (10.3)	1.530 (77.4)	X^2 (2) = 409.4***
Mild (5-9), *n (%)*	210 (12.6)	64 (33.5)	33 (28.4)	222 (11.2)	X^2 (2) = 72.9***
Moderate (10-14), *n (%)*	62 (3.7)	31 (16.2)	17 (14.7)	162 (8.2)	X^2 (2) = 168.4***
Severe (≥15), *n (%)*	38 (2.3)	23 (12.0)	54 (46.6)	63 (3.2)	X^2 (2) = 256.0***
Migration-related characteristics					
Years since immigration, *mean (SD)*[c]	-	28.0 (11.1)	26.1 (10.9)	26.9 (11.0)	F (1) = 1.7*
Second generation, *n (%)*[d]	-	117 (61.6)	12 (10.3)	129 (42.2)	X^2 (1) = 76.8***
Mother tongue = German, *n (%)*	-	32 (16.8)	7 (6.0)	39 (12.7)	X^2 (1) = 7.5**
German language proficiency, *mean (SD)*[e]	-	1.4 (0.7)	2.8 (1.0)	2.0 (1.1)	F (1) = 165.8***

Note. G-G = Germans with no migration background completing the German version of the PHQ-9, T-G = Turkish immigrants completing the German version of the PHQ-9, T-T = Turkish immigrants completing the Turkish version of the PHQ-9.

[a]Includes all school graduation certificates normally received after 9 or more years of school, i.e. the German "Hauptschulabschluss", "Realschulabschluss" or "Abitur", and the Turkish "Ortaokul diploması" or "Lise bitirme sınavı". [b]Working part-time or full-time. [c]Applies only for participants who were born in Turkey. [d]Participants born in Germany, both parents born in Turkey. [e]Self-reported German language proficiency, if mother tongue is Turkish (1= very good,4 =poor/bad).

*p<.05, **p<.01, ***p<.001

Cross-Cultural Validation Of The PHQ-9

Table 2

Item slope *a* and item locations b_1, b_2, and b_3, stratified by language and ethnicity.

Item	Sample[a]	*a (SE)*	b_1 *(SE)*	b_2 *(SE)*	b_3 *(SE)*
1. Anhedonia	G-G	2.93 (0.17)	-0.49 (0.04)	0.92 (0.07)	1.54 (0.10)
	T-G	2.59 (0.35)	-0.45 (0.12)	1.15 (0.14)	1.85 (0.20)
	T-T	1.45 (0.32)	-0.52 (0.29)	1.46 (0.26)	2.06 (0.34)
2. Depressed mood	G-G	3.97 (0.26)	-0.26 (0.04)	0.83 (0.06)	1.47 (0.10)
	T-G	3.46 (0.51)	-0.13 (0.10)	0.80 (0.11)	1.51 (0.15)
	T-T	4.16 (0.84)	-0.13 (0.13)	0.88 (0.18)	1.26 (0.22)
3. Sleep problems	G-G	2.54 (0.14)	-0.60 (0.04)	0.63 (0.06)	1.31 (0.09)
	T-G	2.37 (0.32)	-0.47 (0.13)	0.55 (0.11)	1.34 (0.16)
	T-T	2.33 (0.48)	-0.48 (0.20)	0.67 (0.18)	1.02 (0.21)
4. Low energy	G-G	3.02 (0.17)	-0.83 (0.04)	0.56 (0.06)	1.32 (0.09)
	T-G	2.94 (0.40)	-0.84 (0.13)	0.43 (0.10)	1.22 (0.14)
	T-T	2.95 (0.61)	-0.78 (0.23)	0.77 (0.17)	1.12 (0.21)
5. Appetite changes	G-G	2.53 (0.16)	0.04 (0.05)	1.08 (0.08)	2.07 (0.15)
	T-G	2.40 (0.34)	0.00 (0.11)	0.81 (0.12)	1.55 (0.18)
	T-T	1.57 (0.36)	0.07 (0.20)	1.59 (0.30)	1.88 (0.34)
6. Low self-esteem	G-G	3.04 (0.20)	0.05 (0.04)	0.93 (0.07)	1.54 (0.11)
	T-G	2.95 (0.44)	0.14 (0.10)	1.01 (0.12)	1.62 (0.17)
	T-T	2.97 (0.64)	0.03 (0.14)	1.13 (0.21)	1.51 (0.26)
7. Concentration difficulties	G-G	2.92 (0.19)	0.08 (0.05)	1.07 (0.08)	1.89 (0.13)
	T-G	2.08 (0.30)	0.09 (0.11)	0.98 (0.14)	1.75 (0.21)
	T-T	2.33 (0.51)	0.33 (0.15)	1.27 (0.23)	1.93 (0.32)
8. Psychomotor changes	G-G	2.32 (0.17)	0.63 (0.07)	1.64 (0.13)	2.39 (0.20)
	T-G	2.67 (0.43)	0.56 (0.11)	1.51 (0.17)	2.04 (0.23)
	T-T	2.76 (0.64)	0.25 (0.14)	1.25 (0.22)	1.58 (0.27)
9. Suicidal ideation	G-G	2.74 (0.23)	0.79 (0.07)	1.64 (0.12)	2.29 (0.19)
	T-G	2.40 (0.42)	1.02 (0.13)	1.71 (0.20)	2.28 (0.29)
	T-T	2.06 (0.52)	0.90 (0.18)	1.86 (0.32)	2.08 (0.36)

Note. Fields are shaded in grey where DIF (see Table 3) is present.
[a]G-G = Germans with no migration background completing the German version of the PHQ-9 ($N = 1.670$), T-G = Turkish immigrants completing the German version of the PHQ-9 ($N = 191$), T-T = Turkish immigrants completing the Turkish version of the PHQ-9 ($N = 116$).

Table 3

Analyses of differential item functioning (DIF).

	DIF related to language[a]			DIF related to ethnicity and migration background[b]		
Item	Total[c]	Slope parameter[d]	Location parameters[e]	Total[c]	Slope parameter[d]	Location parameters[e]
1. Anhedonia	10.9*	6.4*	4.5	2.2	*0.4*	*1.8*
2. Depressed mood	*4.3*	*0.5*	*3.8*	*4.0*	*0.3*	*3.7*
3. Sleep problems	8.3	0.1	8.3*	*5.3*	*0.4*	*4.9*
4. Low energy	11.2*	0.0	11.2*	*2.8*	*0.1*	*2.7*
5. Appetite changes	19.7***	3.3	16.4***	14.8**	*0.3*	14.5**
6. Low self-esteem	*3.6*	*0.3*	*3.3*	*0.2*	*0.0*	*0.2*
7. Concentration difficulties	*5.1*	*0.2*	*4.8*	18.7***	*6.8***	12.0**
8. Psychomotor changes	*4.2*	*0.0*	*4.2*	*1.9*	*0.1*	*1.9*
9. Suicidal ideation	*5.6*	*0.4*	*4.2*	*3.0*	*0.3*	*2.7*

Note. We report X^2 statistics. Significant X^2 tests indicate that there is a difference in item functioning. Results for anchor items are printed in italics. X^2 values for anchor items are reported from the last iteration of step one, where anchor items have been selected and purified. Fields are shaded in grey for candidate DIF items, and X^2 values are those estimated from the second stage of analysis, i.e. where candidate DIF items were tested against the previously identified set of DIF-free anchor items.

[a]Analysis 1 comparing T-G (Turkish immigrants completing the German version of the PHQ-9, $N = 191$) with T-T (Turkish immigrants completing the Turkish version of the PHQ-9, $N = 116$). [b]Analysis 2 comparing G-G (Germans with no migration background completing the German version of the PHQ-9, $N = 1,670$) with T-G (Turkish immigrants completing the German version of the PHQ-9, $N = 191$). [c]df = 4. [d]df = 1. [e]df = 3.

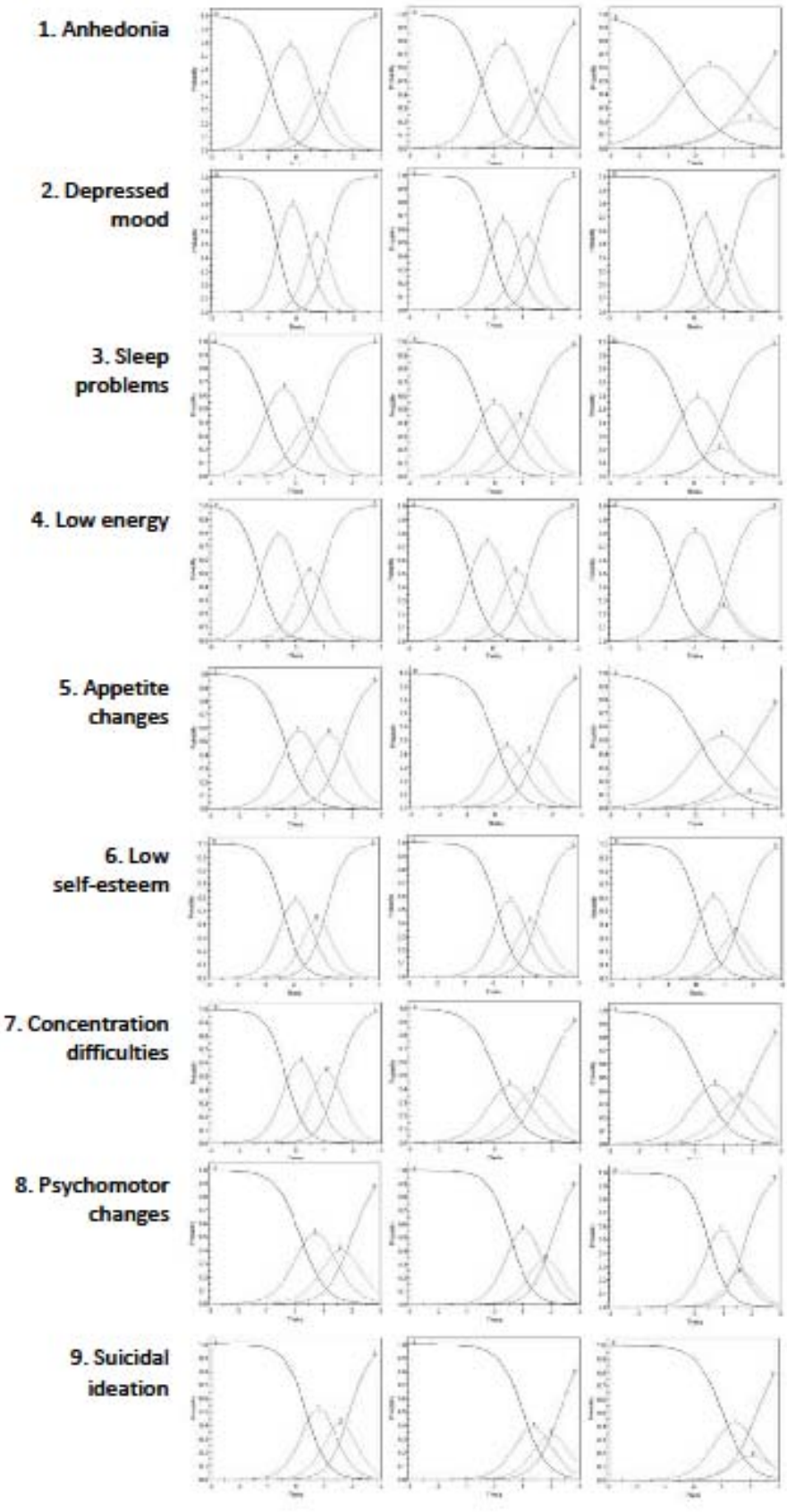
*$p < .05$, **$p < .01$, ***$p < .001$

Figure Captions

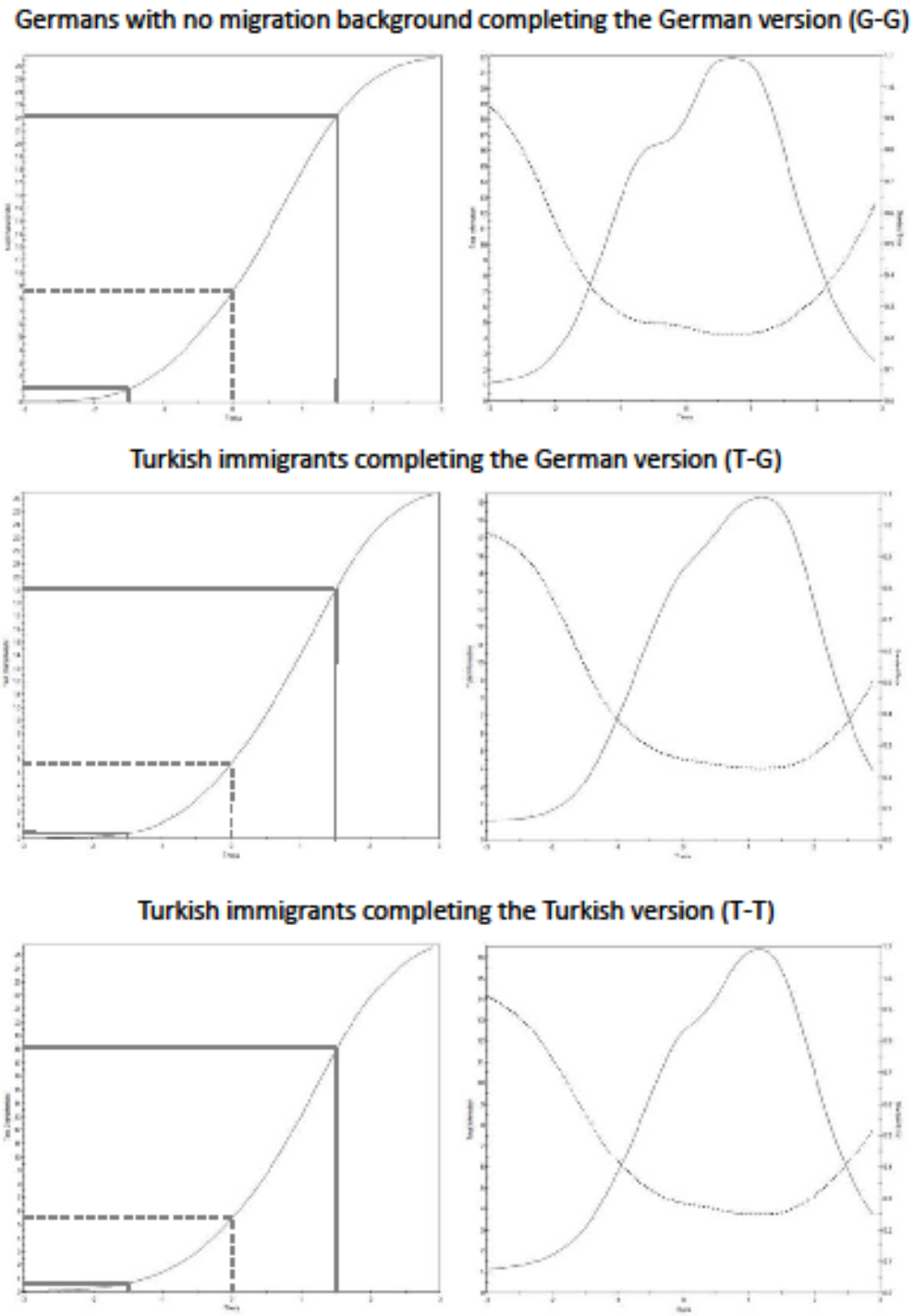
Figure 1. Item characteristic curves (ICC) for each PHQ-9 depression item in all three subgroups. Left column: ICCs for each item for G-G; middle column: ICCs for T-G; right column: ICCs for T-T. Response options are 0 (not at all), 1 (several days), 2 (more than half the days), or 3 (nearly every day). The X-axis indicates the estimated level of depression (theta). The Y-axis indicates the probability of endorsing a response option at a given level of estimated depression.

Figure 2. Test characteristic curves (TCC) and test information curves (TIC) for the PHQ-9 for all three subgroups. TCCs can be found in the left column. The X-axis indicates the estimated level of depression (theta) and the Y-axis indicates the most likely expected PHQ-9 sum score associated with each level of depression. The dotted lines may serve as a guide when estimating differences between TCCs with respect to the most likely expected PHQ-9 sum score corresponding to levels of depression at the group mean (theta = 0), 1.5 standard deviations below the group mean, and 1.5 standard deviations above the group mean. TICs can be found in the right column. The X-axis continues to be the estimated level of depression (theta). Here, the solid line plots the amount of measurement precision, i.e. measurement information (left Y-axis), at each depression level. The dotted line plots the standard error of measurement (right Y-axis) associated with each depression level.

Cross-Cultural Validation Of The PHQ-9: Figure 1



Cross-Cultural Validation Of The PHQ-9: Figure 2



7.2 STUDIE II: VERÖFFENTLICHTE PUBLIKATION

J. Racial and Ethnic Health Disparities (2015) 2:112–123
DOI 10.1007/s40615-014-0054-y

Motivation for Psychotherapy and Illness Beliefs in Turkish Immigrant Inpatients in Germany: Results of a Cultural Comparison Study

Hanna Reich · Luisa Bockel · Ricarda Mewes

Received: 13 May 2014 / Revised: 7 August 2014 / Accepted: 22 August 2014 / Published online: 1 October 2014

Abstract
Objective Some immigrant populations, for instance, Turkish immigrants, suffer from worse mental health than the general population. Moreover, psychotherapeutic treatment does not work well in this group. This might be explained by lower motivation for psychotherapy and particular illness beliefs as important early predictors of treatment outcome. We investigate differences in these predictors between Turkish immigrant inpatients and inpatients without a migration background and evaluate whether particular illness beliefs have a negative impact on motivation for psychotherapy.
Method Turkish immigrant inpatients and inpatients without a migration background (N=100), suffering from depressive disorder, somatoform disorder, and/or adjustment disorder, completed questionnaires assessing motivation for psychotherapy, depressive and somatic symptoms, illness perception, illness-related locus of control, and causal illness attributions.
Results Despite a higher symptom burden, motivation for psychotherapy was lower in Turkish immigrant inpatients than in inpatients without a migration background (d=0.54). This was fully explained by stronger beliefs in supernatural causes of illness and higher fatalistic–external illness-related locus of control in the Turkish immigrant sample (mediation analysis; R^2=0.27).
Conclusions Turkish immigrants believe in supernatural or fatalistic causes of illness and fatalistic–external locus of control to a greater extent than German inpatients without a migration background. These beliefs reduce motivation for psychotherapy and need to be addressed in psychotherapeutic treatment in order to secure positive treatment outcomes.

H. Reich (✉) · L. Bockel · R. Mewes
Division of Clinical Psychology and Psychotherapy, Department of Psychology, University of Marburg, Gutenbergstrasse 18, 35032 Marburg, Germany
e-mail: hanna.reich@staff.uni-marburg.de

Keywords Turkish immigrants · Motivation for psychotherapy · Illness beliefs · Affective disorders · Somatoform disorders

Migration is a highly defining life event which can lead to mental distress. It constitutes an overall risk factor for psychiatric disorders [1, 2]. In the initial period following migration, a "healthy immigrant effect" can be observed, i.e., the prevalence of common mental health problems is initially lower than in the general population [3]. However, the health of immigrants tends to worsen over time to match that of the general population [4, 5]. Moreover, some immigrant groups, e.g., Turkish immigrants, suffer from poor mental health, as demonstrated by elevated prevalence rates of common mental disorders like depression, anxiety disorders, and somatoform disorders [6–9]. Yet, psychotherapeutic treatment in immigrant patients is considered to be more complex, and the outcome appears to be less favorable than in patients without a migration background [10–12]. In order to improve the mental health treatment of immigrant patients, the reasons for this poor outcome need to be investigated. Specifically, knowledge about early predictors is necessary, which help to identify immigrant patients at risk for an unfavorable treatment outcome.

Our study focuses on Turkish immigrant inpatients and inpatients without a migration background in Germany. Turkish immigrants represent the largest minority group in Germany [13] and are among the largest three immigrant populations in other European countries such as The Netherlands, Denmark, and Austria [14]. It has been shown that Turkish immigrant inpatients in Germany achieve worse mental health treatment results than inpatients without a migration background [15, 16]. Lower motivation for psychotherapy in Turkish immigrants might provide one explanation for this.

Treatment motivation has been shown to be an important predictor of treatment success in clinical samples without a migration background [17–20]. Openness to psychotherapy pretreatment generally predicts more positive treatment outcomes [21]. Similarly, it was demonstrated that patients with depressive symptoms who were highly motivated for psychotherapeutic interventions from the outset benefited significantly more from inpatient treatment than those who were less motivated [22]. Motivation for psychotherapy has also been shown to predict dropout from inpatient treatment [23]. First studies investigating non-clinical immigrant samples showed that attitudes towards psychotherapy were more negative in second-generation Turkish immigrants than in Germans [24]. In sum, low motivation for psychotherapy is a risk factor for and early predictor of unfavorable treatment outcome. However, studies on motivation for psychotherapy in clinical samples with a migration background are lacking.

Illness beliefs are important determinants of treatment motivation [25, 26]. Cultural norms and values influence specific attitudes and beliefs about illness [27] and offer explanatory models for understanding illness [28, 29]. For example, Turkish immigrants in Great Britain were found to be more convinced that health was outside their immediate control than native British people [30]. Likewise, Turkish-born female immigrants in Sweden mostly regarded their own capacity to influence recovery as low [31]. Two studies found stronger external causal illness attributions in Turkish immigrant inpatients than in German inpatients without a migration background [32, 33]. Another study showed that types of attributions were related to hope for future well-being in Turkish inpatients: Attributing illness to the self-familial area of influence increased hope, whereas attributing illness to the uncontrollable area of influence decreased hope [34]. We assume that some illness beliefs that are prominent in Turkish immigrants, such as external locus of control and external illness attribution, reduce motivation for psychotherapy. To the best of our knowledge, no empirical study has tested this assumption to date.

In sum, treatment motivation is of crucial importance for treatment success. Motivation for psychotherapy in Turkish immigrants may be lower than in inpatients without a migration background. However, this effect has not yet been studied in a clinical sample. Furthermore, the reasons for the assumed lower motivation for psychotherapy are unclear. This is particularly important, as inferior outcomes of mental health interventions in immigrant populations can result in persistent individual suffering, as well as high societal costs. Understanding the reasons for reduced motivation for psychotherapy may help to identify individuals at risk for unfavorable outcomes and provide valuable information for the development of specific interventions to enhance treatment motivation in Turkish immigrant inpatients.

Notwithstanding the importance of motivation for psychotherapy, the concept of motivation itself is multifaceted and has been poorly defined in the literature [25, 35]. Therefore, with the aim of avoiding ambiguities, we wish to make some specifications according to the model of psychotherapy motivation proposed by Drieschner and colleagues [25]: They differentiate between *internal determinants of treatment motivation* (e.g., problem recognition, level of suffering) and *motivation to engage in treatment*, which is specifically directed to a specific behavior, i.e., treatment engagement. The aspects of treatment motivation assessed in the present study are expectations of healing due to psychotherapeutic treatment, the type of role which the patient expects to play, attitudes towards psychotherapy, and previous experiences with psychotherapy. These concepts can be allocated to the *internal determinants of treatment motivation* in Drieschner's model of psychotherapy motivation.

In the present study, we examine the following hypotheses: (1) Turkish immigrant inpatients are less motivated for psychotherapy than German inpatients without a migration background. (2) Illness-related fatalistic–external locus of control, fatalistic causal illness attributions, and supernatural causal illness attributions are more pronounced among Turkish immigrant inpatients than in German inpatients without a migration background. (3) Lower motivation for psychotherapy in Turkish immigrant inpatients than in inpatients without a migration background (hypothesis 1) is mediated by illness-related fatalistic–external locus of control, fatalistic causal illness attributions, and supernatural causal illness attributions.

Subjects and Methods

Sample

A total of $n=50$ Turkish immigrant inpatients and $n=50$ German inpatients without a migration background participated in the study. All participants were inpatients in psychiatric treatment in Germany and had been diagnosed with depressive disorder, somatoform disorder, and/or adjustment disorder by experienced clinical staff. Demographic data of participants are presented in Table 1. In both subgroups, about two-thirds of the participants were female, and the mean age was approximately 46 years. Turkish immigrant inpatients had received fewer years of education than inpatients without a migration background (7.42 vs. 11.06 years) and were less likely to be in employment (34 % vs. 70 %). The difference in educational levels between Turkish immigrants in Germany and Germans without a migration background reflects actual differences at the population level [36]. According to the microcensus of the Federal Statistical Office and the Berlin Institute for Population and Development, Turkish

Table 1 Study sample characteristics

	Turkish immigrant inpatients[a]		Inpatients without a migration background[a]			
Variable	M (SD)	Range	M (SD)	Range	t	p
Age	46.4 (9.1)	18–61	45.9 (8.9)	24–65	−0.30	0.765
Education[b]	7.4 (3.1)	0–13	11.1 (1.7)	9–15	7.25	<0.001
Severity of depressive symptoms (PHQ-9)	18.0 (5.4)	5–27	13.6 (6.6)	2–26	−3.63	<0.001
Severity of somatoform symptoms (PHQ-15)	14.0 (4.8)	4–24	9.1 (4.9)	1–20	−5.09	<0.001
					χ^2	p
Females	66 %			62%	0.17	0.677
Employment[c]	34 %			70%	12.98	<0.001

[a] $n=50$ each

[b] Years of education

[c] Being in a part-time or full-time job

immigrants are the least integrated of all immigrant groups in Germany. This is apparent in high proportions of persons with no or only basic educational degrees, high rates of unemployed persons or housewives, and a great number of persons being dependent on social welfare [37, 38]. Turkish immigrant inpatients in the present study reported a higher intensity of depressive and somatic symptoms than inpatients without a migration background, as indicated by higher scores on the PHQ-9 and PHQ-15 (see Table 1).

The majority of the Turkish immigrant inpatients were born in Turkey (84 %) and had been living in Germany for about 31 years. Turkish immigrant inpatients born in Germany (16 %) were second-generation immigrants with both parents born in Turkey. Of the sample of Turkish immigrant inpatients, 6 % had a temporary residence permit; 68 % had a permanent residence permit, and 26 % had a German passport. Their self-reported German language proficiency was as follows: 2 % native speaker, 12 % very good, 26 % good, 20 % intermediate, and 40 % poor. 82 % of the Turkish immigrant inpatients chose to respond to the Turkish versions of the questionnaires.

Procedure

In this cross-sectional study, data were collected between September 2011 and January 2012 in five psychiatric hospitals in the Federal State of Hessen, Germany. In Germany, all patients are referred to inpatient treatment by their family doctor and/or a psychiatrist. Inclusion criteria for study participation were: age 18–65 years, either Turkish migration background or no migration background at all, and a clinical diagnosis of depressive disorder, somatoform disorder, or adjustment disorder. These mental illnesses were selected because they are the most widely observed in Turkish immigrant inpatients in Germany [39]. Comorbidities were allowed. Exclusion criteria were: psychotic or manic symptoms, substance abuse, and neurodegenerative diseases. Inpatients who met the study criteria were asked if they would be willing to participate voluntarily in the study. All participating patients signed informed consent forms. They provided demographic data and completed several self-rating questionnaires as described below. At the time of data collection, 27 % of the participants had been in treatment for less than a week, 54 % for 1 to 4 weeks, and 19 % for more than 4 weeks. Questionnaires were administered individually. All instruments were provided in German and Turkish versions. A bilingual research assistant was present to help participants at all times and also read out questions to the participants if they were illiterate (this applied to some Turkish women). Samples were matched according to age, sex, and clinic site. No data regarding non-participation were obtained in this study. The study was approved by the local Ethics Committee at the Institute of Psychology at Philipps-University, Marburg.

Measures

The instruments used in the present study are outlined below. The instruments FMP, PHQ-15, IPQ-R Causal Illness Attributions, and KKG were not available in Turkish. Therefore, they were translated into the Turkish language following the forward- and backward-translation method [40].

Psychotherapeutic Treatment Expectations and Openness to Psychotherapy Scales (FMP) This German-language questionnaire [41] aims to assess patients' motivation for psychotherapy. In the present study, we operationalize motivation for psychotherapy according to four different aspects: expectations of healing due to psychotherapeutic treatment, the type of role the patient expects to play, attitudes towards psychotherapy, and previous experiences with psychotherapy. Consequently, we used the first two scales of the FMP (28 items), i.e., Psychotherapeutic Treatment Expectations and Openness to Psychotherapy.

Response categories range from 1 ("not at all") to 5 ("fully agree"). The sum score of all 28 items ranged from 28 to 140 and was used as an indicator of the motivation for psychotherapy. Symptom-related suffering (scale 3 of the FMP) and causal illness attributions (scale 4) were assessed by other instruments (see below). The Turkish version was translated as described above.

The Patient Health Questionnaire Depressive and Somatic Symptom Scales (PHQ-9, PHQ-15) The severity of depressive and somatic symptoms was measured with the PHQ-9 and PHQ-15, respectively [42–44]. Nine items of the PHQ assess depressive symptoms (PHQ-9), and the scale has shown high sensitivity and specificity for the identification of depressive disorders [45, 46]. Response categories for these items range from 0 ("not at all") to 3 ("nearly every day"). For the present study, a continuous depression score was calculated, which consisted of the sum of the answers to the nine items, ranging from 0 to 27. The German and the Turkish versions of the PHQ-9 [47, 48] are available from the Pfizer PHQ-screener website [49]. A recent study showed acceptable reliability and validity for the Patient Health Questionnaire in the Turkish population [50].

Somatic complaints were screened with the PHQ-15 subscale, a checklist of 15 somatic symptoms typical for primary care patients, which are often medically unexplained [43, 44, 51]. The PHQ-15 assesses a broad range of pain symptoms, especially pain in the stomach, back pain, headache, chest pain, pain in extremities or in joints, pain associated with menstruation, and pain during sexual intercourse. The latter two items were not used in the present study, since they were considered as culturally inappropriate for Turkish immigrants. For the last 4 weeks, the severity of each symptom can be rated from 0 ("not bothered at all") to 2 ("bothered a lot"); the total score ranges from 0 to 30. The German version is available online [49]; the Turkish version was translated as described above.

The Brief Illness Perception Questionnaire (Brief IPQ) The Brief IPQ [52] assesses the subjective illness concept and the cognitive representations about illness using one item for each scale of the more detailed IPQ-R [53], namely consequences, timeline, personal control, treatment control, identity, concern, understanding, and emotional response. Response categories for these items ranged from 0 to 10, with endpoints being labeled according to the questions (e.g., for the question "How much does your illness affect your life?", the labeled endpoints are 0 "no affect at all" to 10 "severely affects my life"); the sum score for the Brief IPQ ranges from 0 to 80, with higher scores indicating a more pessimistic and threatening illness perception. Turkish and German versions of the Brief IPQ were available [54, 55].

The Revised Illness Perception Questionnaire (IPQ-R) Causal Illness Attributions Scale For the assessment of causal illness attributions, we chose not to use the open response format provided by the Brief IPQ, but to administer closed-format items. For this purpose, the scale 'causal illness attributions' of the IPQ-R [53] plus three culture-specific items derived from the work of Kizilhan [33] were used. These describe spiritual and supernatural illness attributions, namely "God's will", "curse/ enchantment", and "evil spirits". Patients were asked to rate how strongly they believe in a certain cause of illness, with response categories ranging from 1 ("not at all") to 5 ("fully agree"). A German version was available [56]; the Turkish version was translated as described above. Exploratory factor analysis revealed five factors of illness attributions that were used for further analysis: psychological cause ("worry", "emotional state", "family problems", "negative mental attitude"), stress-related cause ("stress", "overwork"), biological cause ("somatic/biomedical", "heredity", "pollution or other external influences"), fatalistic cause ("bad luck", "destiny"), and supernatural cause ("God's will", "curse/ enchantment", "evil spirits").

Locus of Control Inventory for Illness and Health (KKG) While the Brief IPQ provides only two items asking about personal and treatment control, the German-language questionnaire KKG [57] extends the assessment and measures three dimensions of illness-related locus of control (LOC), namely beliefs in internal, social–external, and fatalistic–external illness-related LOC. Each dimension is assessed by seven items, with response options ranging from 1 ("not at all") to 6 ("fully agree"); dimensional scores range from 7 to 42. Higher scores indicate greater conviction regarding a particular LOC dimension. The Turkish version was translated as described above.

Statistics

Statistical analyses were carried out using SPSS 19 for Windows. Prerequisites for data analyses were checked, and data were normally distributed. Less than 5 % of values were missing completely at random (Little's MCAR test: n.s.), and missing values were imputed using the expectation maximum-method employing the SPSS missing value tool.

For sample comparisons of key dependent variables, data were analyzed for each questionnaire using univariate or multivariate analysis of variance as appropriate. Due to the fact that sample differences in education and employment reflect natural characteristics of differences between these groups in the German population, no covariates were included in this step of analysis to avoid over-adjustment. Standardized effect sizes are given as Cohen's *d* [58]. The 95 % confidence

intervals for Cohen's *d* were calculated following the recommendations of Grissom and Kim [59]. Confidence intervals that do not contain 0 provide evidence, at the two-tailed 0.05 level of statistical significance, that the effect in the population does not equal 0 [59], i.e., that there actually *is* a difference between Turkish immigrant inpatients and German inpatients without a migration background in the construct in question (e.g., motivation for psychotherapy).

Next, a hierarchical multiple regression analysis was conducted to examine which demographic, symptom severity, or illness beliefs variables predicted motivation for psychotherapy in the examined group as a whole (Turkish immigrant inpatients and inpatients without a migration background as one group). To control for the influence of migration background, this variable was entered in step 1, followed by further demographic variables in step 2, depressive and somatic symptom intensity in step 3, and illness beliefs in step 4. The β-coefficients given in the results section are partial regression coefficients. As an estimator of effect size, each partial regression coefficient estimates the change in the dependent variable for each unit increase in the corresponding independent variable when all other dependent variables are statistically held constant, i.e., estimating the "pure" contribution [59]. Means of β-coefficients=0, and standard deviations=1, as in *z*-scores.

Finally, we ran a multiple-mediation model to test the hypothesis that lower motivation for psychotherapy in Turkish immigrant inpatients is mediated by illness-related fatalistic–external locus of control, fatalistic causal illness attributions, and supernatural causal illness attributions. Mediation exists when a predictor (*X*: Turkish migration background vs. no migration background) affects a dependent variable (*Y*: motivation for psychotherapy) indirectly through at least one intervening variable or mediator (*M*: illness beliefs, see Fig. 1). Mediation analysis helps to establish causal relationships between variables and explain how or by what means a causal effect occurs [60].

According to Preacher and Hayes [60], special qualities of multiple mediation (instead of various univariate mediation tests) include (a) the analysis of the total indirect effect, i.e., an overall mediation effect of all the mediators under investigation and (b) the ability to determine the unique mediating effect of a specific variable within a single model, controlling for the presence of other mediators. Bootstrap analysis, a nonparametric sampling procedure, was used to test the significance of the indirect effects. Bootstrap analysis has the advantage of greater statistical power without assuming multivariate normality in the sampling distribution, allowing a parsimonious and precise analysis of multiple mediators [60, 61]. For our analysis, we used the SPSS macro designed for multiple mediation analysis by Preacher and Hayes [60]. Five thousand bootstrap samples were obtained; confidence intervals were bias-corrected and accelerated.

Results

Intercorrelations Among Study Variables

A correlation matrix was generated to examine the bivariate relationship between each psychosocial and demographic variable in the study and to check for multicollinearity. Various study variables showed correlations in the expected direction (see Table 2). However, the pattern of relationships of these variables was mainly modest in size, i.e., multicollinearity was not found.

Sample Differences in Motivation for Psychotherapy, Illness-Related Locus of Control, and Causal Illness Attributions

Turkish immigrant inpatients were less motivated for psychotherapy than inpatients without a migration background (p=0.008), with the difference equating to a medium effect size (d [CI]=0.54 [0.14; 0.94], Table 3). Moreover, Turkish immigrant inpatients perceived their illness as more impairing and less controllable than did inpatients without a migration background (p=0.001), with the difference equating to a medium to large effect size (d [CI]=0.7 [0.3; 1.1]). Regarding illness-related LOC, Turkish immigrant inpatients had lower internal control beliefs (p<0.001) and higher fatalistic–external control beliefs (p=0.001) than inpatients without a migration background, with both differences equating to medium to large effect sizes (d [CI]=0.81 [0.4; 1.22], and d [CI]=0.7 [0.3; 1.1], resp.). There was no difference in social–external LOC. Turkish immigrant inpatients were more convinced of a fatalistic (p=0.002, d [CI]=0.66 [0.26; 1.06], i.e., medium effect size) or supernatural cause of their illness (p<0.001, d [CI]=1.03 [0.61; 1.45], i.e., large effect size) than inpatients without a migration background, while there were no differences between samples regarding beliefs in psychological, stress-related, or biological causes of illness.

Predictors of Motivation for Psychotherapy

Through the application of a hierarchical multiple regression analysis, it is possible to test the hypothesis that illness beliefs have an additional and unique explanatory power regarding motivation for psychotherapy going beyond demographic variables and symptom severity. The results showed that only migration background and illness beliefs were significant predictors of motivation for psychotherapy (p≤0.01, and p≤0.05, respectively, see Table 4).

The migration background accounted for 7 % of the variance in motivation for psychotherapy, and illness beliefs explained a further 20 %. In particular, fatalistic–external LOC (β=−0.26, p=0.042) and supernatural causal illness attribution (β=−0.33, p=0.007) showed a significant negative

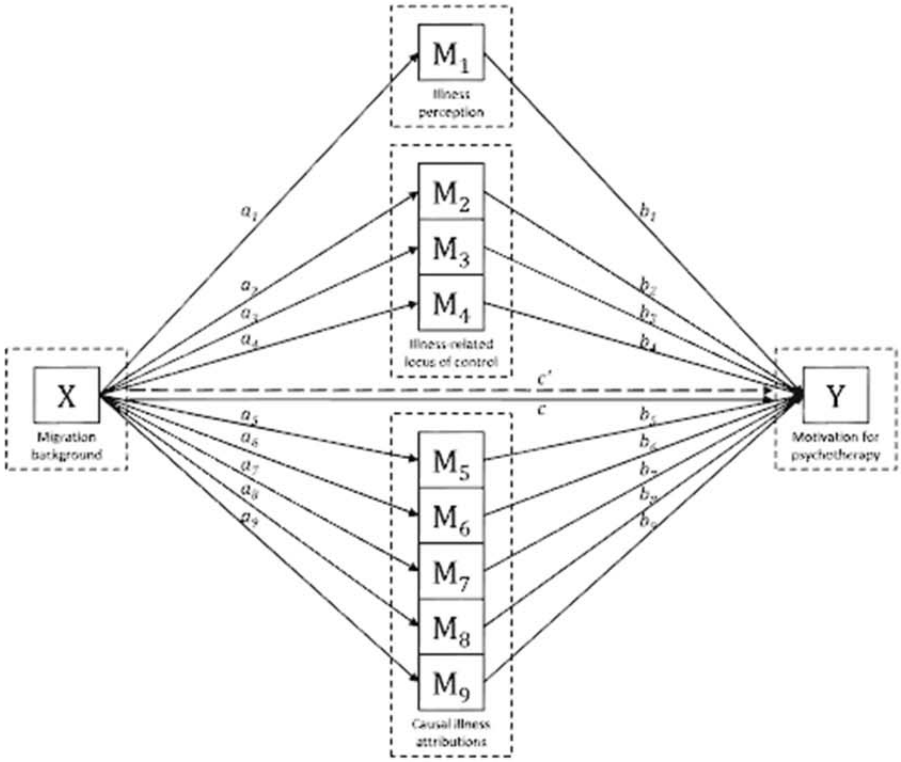


Fig. 1 Multiple-mediation model for the influence of migration background on motivation for psychotherapy mediated by illness beliefs, tested on the basis of Preacher and Hayes [60]. *X* independent variable, migration background; M_1–M_9 proposed mediators; M_1 illness perception; M_2 internal locus of control; M_3 social–external locus of control; M_4 fatalistic–external locus of control; M_5 psychological illness attribution; M_6 stress-related illness attribution; M_7 biological illness attribution; M_8 fatalistic illness attribution; M_9 supernatural illness attribution; *Y* dependent variable, motivation for psychotherapy

impact on motivation for psychotherapy, i.e., the stronger the fatalistic-external LOC and the supernatural causal illness attribution, the lower the motivation for psychotherapy.

Mediating Effects of Illness Beliefs on Motivation for Psychotherapy

The hierarchical multiple regression analysis demonstrated the major influence of illness beliefs on motivation for psychotherapy. Based on this, a multiple mediation model was tested in order to examine the hypothesis that lower motivation for psychotherapy in Turkish immigrant inpatients is mediated by illness-related fatalistic–external locus of control, fatalistic causal illness attributions, and supernatural causal illness attributions. The multiple mediation model (see Fig. 1 and Table 5) showed a significant fit, and the proportion of explained variance was medium to high in line with Cohen [58] (R^2=0.27, Adj. R^2=0.19, F (10, 89)=3.28, p=0.001). The total indirect effect of illness beliefs was significant, as indicated by the 95 % bias-corrected and accelerated bootstrapping confidence interval that did not contain zero (95 % BCA CI=[−12.96; −2.67]). The direct effect of a migration background on psychotherapy motivation (c' path) was no longer significant when illness beliefs were included in the model (p>0.05). Consequently, the association between migration background and psychotherapy motivation was fully mediated by illness beliefs.

Examining the specific indirect effects of each mediator on the relationship between migration background and motivation for psychotherapy, fatalistic–external locus of control, and supernatural illness attribution were significant mediators (95 % BCA CI for *ab*-path=[−5.15; −0.57], and=[−8.30; −0.49], resp.). Turkish migration background was positively related to fatalistic-external locus of control (B=4.56, $p\leq$ 0.001) and to supernatural illness attributions (B=0.99, $p\leq$ 0.001), which in turn were negatively related to motivation for psychotherapy (B=−0.50, $p\leq$0.05, and B=−3.73, $p\leq$0.01, resp.).

Discussion

The current study focused on the influence of migration background on early predictors of treatment outcome, namely motivation for psychotherapy and illness beliefs. Motivation for psychotherapy was lower in Turkish immigrant inpatients than in German inpatients without a migration background. Turkish immigrant inpatients perceived their illness as less controllable by themselves and more controlled by fatalistic influences than did inpatients without a migration

Table 2 Intercorrelations among study variables

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1-PTM	1.00	−02	−17	−0.04	0.12	0.05	−0.11	0.03	0.02	−0.04	−0.18	−0.30	0.00	−0.07	−0.03	0.13
2-PHQ-9	−0.12	1.00	0.45**	0.48***	−0.14	0.26	0.15	0.50***	0.14	0.11	0.24	0.08	0.19	0.34*	−0.14	−0.08
3-PHQ-15	0.02	0.61***	1.00	0.30*	−0.05	0.33*	0.54***	0.34*	0.39**	0.16	0.28*	0.18	0.09	0.36*	−0.16	−0.04
4-B. IPQ	−0.13	0.70***	0.67***	1.00	−0.32*	−0.17	0.23	0.48***	0.20	0.27	0.18	−0.08	0.11	0.06	0.00	−0.21
5-Int. LOC	0.00	0.23	0.13	0.10	1.00	0.49***	0.34*	0.13	0.09	−0.01	0.16	0.42**	−0.01	0.09	−0.24	−0.11
6-Soc. LOC	0.25	0.05	0.13	0.03	−0.05	1.00	0.43**	0.36*	0.33*	0.12	0.37**	0.33*	0.01	0.33*	−0.37**	−0.17
7-Fat. LOC	−0.40**	0.21	0.12	0.17	−0.18	0.08	1.00	0.33*	0.42**	0.30*	0.32*	0.23	0.16	0.20	−0.37**	−0.13
8-Psych. IA	0.22	0.29*	0.19	0.16	−0.04	0.25	0.11	1.00	0.27	0.23	0.41**	0.18	0.01	0.19	−0.24	−0.13
9-Stress IA	0.14	−0.12	−0.02	−0.10	−0.09	0.04	0.22	−0.04	1.00	0.22	−0.04	0.08	0.00	−0.23	−0.09	−0.12
10-Biol. IA	−0.16	0.17	0.26	0.16	0.01	0.17	0.34*	0.04	−0.07	1.00	0.17	0.19	0.38**	0.06	−0.49***	−0.13
11-Fat. IA	−0.01	0.14	0.10	0.13	−0.20	0.24	0.46**	0.32*	0.02	0.33*	1.00	0.23	−0.03	0.37**	−0.06	0.04
12-Super. IA	−0.23	−0.02	0.08	0.11	−0.09	−0.04	0.33*	0.10	−0.17	0.33*	0.29*	1.00	−0.17	0.00	−0.10	−0.12
13-Age	−0.06	−0.04	−0.01	0.03	−0.11	0.03	0.10	−0.12	−0.03	0.05	−0.03	0.01	1.00	0.19	−0.45**	−0.15
14-Gender	0.05	−0.01	0.07	0.06	0.22	−0.05	0.09	−0.01	−0.30*	−0.17	−0.01	−0.04	−0.08	1.00	−0.36*	−0.29*
15-Education	0.33*	−0.13	−0.12	−0.29*	0.23	−0.05	−0.27	−0.07	0.04	−0.19	−0.31*	−0.30*	−0.08	0.30*	1.00	0.28
16-Employm.	−0.06	−0.29*	−0.36*	−0.16	.05	−0.32*	−0.17	.03	.10	−0.15	−0.03	−0.10	.20	−0.13	−0.11	1.00

Intercorrelations for Turkish immigrant inpatients are printed above the diagonal; intercorrelations for inpatients without a migration background are printed below the diagonal

PTM psychotherapy motivation, *PHQ-9* severity of depressive symptoms, *PHQ-15* severity of somatic symptoms, *B. IPQ* illness perception (Brief Illness Perception Questionnaire), *Int. LOC* internal locus of control, *Soc. LOC* social–external locus of control, *Fat. LOC* fatalistic–external locus of control, *Psych. IA* psychological illness attribution, *Stress IA* stress-related illness attribution, *Biol. IA* biological illness attribution, *Fat. IA* fatalistic illness attribution, *Super. IA* supernatural illness attribution, gender (*0*=male, *1*=female), *Employm.* employment (*0*=no employment, *1*=part-time or full-time job)

*$p \leq 0.05$, **$p \leq 0.01$, ***$p \leq 0.001$

Table 3 Sample differences in motivation for psychotherapy, illness perception, locus of control, and causal illness attributions

	Turkish immigrant inpatients[a]		Inpatients without a migration background[a]				
Variable	M	SD	M	SD	*F*	*p*	*d* [*CI*][b]
Motivation for psychotherapy	101.4	13.2	107.8	10.7	7.24	0.008	0.54 [0.14; 0.94]
Illness perception	55.4	11.6	47.2	12.2	11.90	0.001	0.7 [0.3; 1.1]
Locus of control							
Internal	23.2	8.3	28.6	4.6	16.32	<0.001	0.81 [0.4; 1.22]
Social–external	26.4	7.2	24.2	5.4	2.91	0.091	0.35 [−0.04; 0.74]
Fatalistic–external	22.2	7.1	17.6	6.1	11.92	0.001	0.7 [0.3; 1.1]
Causal illness attributions							
Psychological cause	4.3	0.9	4.2	0.7	0.53	0.467	0.13 [−0.26; 0.52]
Stress-related cause	4.2	1.0	4.4	0.8	1.19	0.279	0.22 [−0.17; 0.61]
Biological cause	2.9	1.1	2.6	0.9	2.39	0.125	0.3 [−0.09; 0.69]
Fatalistic cause	2.9	1.4	2.1	1.0	10.04	0.002	0.66 [0.26; 1.06]
Supernatural cause	2.4	1.2	1.4	0.7	25.10	<0.001	1.03 [0.61; 1.45]

All means and standard deviations represent raw, nonstandardized scores

[a] $n=50$ each

[b] Standardized effect size Cohen's *d* [95 % confidence interval of Cohen's *d*]. According to Cohen (1988), $d=0.2$ can be interpreted as a small effect, $d=0.5$ as a medium effect, and $d=0.8$ as a large effect. Confidence intervals of Cohen's *d* that do not include 0 provide evidence that there is a difference between the populations of Turkish immigrants and Germans without a migration background in the corresponding variable

Table 4 Hierarchical linear regression analysis for motivation for psychotherapy as dependent variable ($n=100$)

	Dependent variable: motivation for psychotherapy					
Predictor variables	*B*	SE *B*	β	Adj. R^2	ΔR^2	*F*
Step 1: migration background[a]	−6.45	2.40	−0.26**	0.059	0.069	7.24**
Step 2: demographic characteristics				0.027	0.007	1.54
Age	−0.01	0.14	−0.01			
Gender	−0.03	2.63	0.00			
Education	0.34	0.53	0.08			
Employment	0.96	2.70	0.04			
Step 3: symptom severity				0.010	0.004	1.15
Depressive symptoms	−0.04	0.22	−0.02			
Somatic symptoms	−0.14	0.31	−0.06			
Step 4: illness beliefs				0.140	0.199	2.01*
Illness perception	0.01	0.14	0.01			
Internal locus of control	0.26	0.20	0.15			
Social–external locus of control	0.38	0.24	0.20			
Fatalistic–external locus of control	−0.47	0.23	−0.26*			
Psychological illness attribution	3.07	1.84	0.19			
Stress-related illness attribution	1.07	1.57	0.08			
Biological illness attribution	0.66	1.35	0.05			
Fatalistic illness attribution	−0.85	1.17	−0.09			
Supernatural illness attribution	−3.73	1.35	−0.33**			

B unstandardized coefficients, SE *B* standard error of unstandardized coefficients, β standardized coefficients

[a] 0 Inpatients without a migration background, 1 Turkish immigrant inpatients

*$p\leq0.05$, **$p\leq0.01$

Table 5 Multiple-mediation model for the influence of a migration background mediated by illness beliefs (proposed mediators, M_1–M_9) on motivation for psychotherapy (outcome)

Mediators	Migration background to mediator (*a*-path)		Mediator to outcome (*a*-path)		Migration background to outcome (*ab*-path)			
	PE	*SE*	*PE*	*SE*	*PE*	*SE*	95 % BCA CI	
							Lower	Upper
M_1-illness perception	8.19***	2.37	−0.06	0.11	−0.47	0.79	−2.13	1.16
M_2-internal locus of control	−5.40***	1.34	0.26	0.19	1.39	1.10	−3.79	0.55
M_3-social–external locus of control	2.17	1.27	0.31	0.21	0.67	0.65	−0.13	2.86
M_4-fatalistic–external locus of control	4.56***	1.32	−0.50*	0.21	−2.27 $^{sign.}$	1.12	−5.15	−0.57
M_5-psychological illness attribution	0.11	0.15	2.76	1.73	0.31	0.58	−0.51	1.89
M_6-stress-related illness attribution	−0.19	0.18	1.25	1.40	−0.24	0.40	−1.67	0.23
M_7-biological illness attribution	0.31	0.20	0.43	1.21	0.13	0.51	−0.60	1.69
M_8-fatalistic illness attribution	0.78**	0.25	−0.69	1.10	−0.54	1.05	−2.81	1.45
M_9-supernatural illness attribution	0.99***	0.20	−3.73**	1.27	−3.68 $^{sign.}$	1.92	−8.30	−0.49
Total indirect effect					−7.48 $^{sign.}$	2.59	−12.96	−2.67
Direct effect (*c'*)					1.02	3.04		
Total effect (*c*)					−6.45**	2.40		

Model summary for DV model: $R^2 = 0.27$, Adj. $R^2 = 0.19$, $F(10, 89) = 3.28$, $p = 0.001$; *PE* parameter estimate, *SE* standard error of parameter estimate, *95 % BCA CI* 95 % bias-corrected and accelerated bootstrapping confidence intervals for 5,000 bootstrap samples, ^{sign} confidence interval does not contain zero, the indirect effect can be interpreted as significant; confidence intervals containing zero are interpreted as not significant

*$p \leq 0.05$, **$p \leq 0.01$, ***$p \leq 0.001$

background. Furthermore, they were more convinced of fatalistic or supernatural causes of illness than inpatients without a migration background. In this respect, our initial hypotheses were supported. Differences between the samples in terms of illness beliefs explained differences in motivation for psychotherapy. Confidence intervals of the effect sizes for significant sample differences did not include 0, i.e., we can infer from the present data that there are actual differences in motivation for psychotherapy, illness perception, illness-related locus of control, and belief in supernatural or fatalistic causes of illness at the population level.

Since the concept of motivation for psychotherapy is multifaceted, making some specifications regarding our results will be helpful in terms of achieving a sophisticated understanding of the aspects according to which Turkish immigrant inpatients differ from the majority of German inpatients without a migration background. Our results indicate that Turkish immigrant inpatients have higher expectations of healing from medical treatment than from psychotherapeutic interventions. This is in line with a previous study [62] stating that Turkish immigrant outpatients with psychosomatic complaints are commonly treated by a general practitioner or with pharmacological treatment instead of a psychotherapist. Moreover, they request drugs more intensively and are more convinced of the effectiveness of medicines. Our results also indicate that Turkish immigrant inpatients are likely to expect to assume a passive role as a patient in psychotherapy. This is in line with findings that Turkish people hold cultural values that promote respect towards authority figures and do not question or challenge authorities [63]. Furthermore, our results indicate that previous experiences with psychotherapy are rare in Turkish immigrant inpatients, which is confirmed by studies about health care utilization [64–66].

Our study samples differed in their belief in supernatural and fatalistic causes of illness. In the German majority society, such beliefs are quite uncommon. Moreover, rural populations in Turkey were found to favor psychological, social, and medical explanations as causes of mental illness [67], and a community sample of Turkish immigrants in Australia believed more frequently in natural rather than supernatural causes of illness [68]. Nonetheless, beliefs regarding causes of mental illness range from traditional, supernatural attributions to biological attributions in the Turkish culture [69]. Integrating these results, we can assume that Turkish immigrants hold a broader range of causal illness attributions than Germans without a migration background.

Characteristics of the illness-related locus of control also varied considerably between the investigated samples. The emphasis on fatalistic–external locus of control in Turkish immigrant inpatients is in line with the literature [30, 63, 70]; less educated persons, in particular, believe that external factors control their lives [71].

Besides illness beliefs, the level of suffering is another possible predictor of motivation for psychotherapy [21, 72–74]. While our finding of higher symptom levels among Turkish immigrant inpatients is in line with other studies [39,

75], it is noteworthy that this did not influence the motivation for psychotherapy. We can assume that the other factors (e.g., illness beliefs) had a stronger effect on decreasing the motivation for psychotherapy than suffering did on increasing it. On the other hand, the higher symptom scores in the Turkish immigrant inpatients might be explained by a culture-specific aspect of illness communication. Expressing distress, especially about somatic symptoms, and blatant suffering has been observed in immigrant populations before [33, 76, 77]. However, the equivalence of measures has not yet been established for the German and Turkish versions of the PHQ-9 and PHQ-15. Therefore, caution is warranted when comparing mean scores of these instruments.

Sample differences in socio-demographic variables such as education and employment did not explain any differences in treatment motivation. However, lower education coincided with a stronger conviction regarding fatalistic locus of control in the Turkish immigrant sample, and with a lower motivation for psychotherapy, and fatalistic and supernatural illness attributions in the sample without a migration background. This demonstrates an unfavorable influence of low education in general, i.e., low education affected motivation for psychotherapy and illness beliefs negatively in both samples.

Although our samples provided a unique opportunity to compare motivation for psychotherapy and illness beliefs depending on migration background, there may be some limitations regarding the generalizability of our results. Specifically, our samples were rather small and solely included inpatients in psychotherapeutic treatment. No analysis was conducted on non-participants. In the immigrant sample, first-generation immigrants were overrepresented. Consequently, our results may not generalize to all Turkish immigrants (e.g., younger and often more highly educated "second-generation" immigrants; persons without mental disorder or persons who are not attending treatment). Additional studies comparing other important subgroups would help to gain a diversified understanding of the influences of a migration background, culture of origin, and culture of the host country on mental health beliefs. At this point, the application of qualitative methods, e.g., deep interviews, could also be very helpful to get more detailed information on motivation for psychotherapy and illness beliefs in culturally diverse inpatient populations. Analyses of demographic characteristics indicated that the samples differed in education and employment status. To address this, we included these variables in the hierarchical linear regression analysis, thereby controlling for their influence.

In terms of validity, there are some weaknesses in our study: Most of the Turkish-language versions were not culturally validated. Furthermore, the issue of measurement equivalence could not be addressed due to the sample size. The multiple mediation analysis hinted at possible causal relations of the study variables. However, assumptions about causal relations cannot be confirmed using a cross-sectional, correlational design such as that implemented here, but require longitudinal or experimental studies.

The evident limitations notwithstanding, the present study contributes novel findings about treatment motivation and health beliefs of Turkish immigrant inpatients. We managed to include immigrants with a low education and poor German language proficiency in our study. This is an important yet difficult to assess population that is usually excluded from research due to language barriers.

The present study demonstrated the importance and variance of mental health beliefs, i.e., motivation for psychotherapy and illness beliefs. Turkish immigrant inpatients believed in supernatural or fatalistic causes of illness and fatalistic–external locus of control to a greater extent than German inpatients without a migration background. These beliefs had a negative impact on motivation for psychotherapy. Consequently, they need to be addressed in psychotherapeutic treatment in order to secure adequate treatment motivation and positive treatment outcomes. More recent studies showed that mental health treatments of ethnic minority patients can be improved by cultural adaptations and by addressing culture-specific illness beliefs [78, 79]. Future research needs to develop and evaluate culturally adapted treatments for diverse populations. The challenge will be to provide feasible and realistic approaches, which can be integrated into routine mental health care. While there are endeavors towards the development of holistic treatment manuals for ethnic minority patients (e.g., [80]), the development of short modules (e.g., one-session interventions, E-Health applications, focused group sessions) could also be beneficial to complement standard treatments.

Acknowledgments We would like to thank all cooperating clinic sites, namely: Vitos Clinic for Psychiatry and Psychotherapy Marburg; Clinic for Psychiatry and Psychotherapy at the Hospital of Offenbach; Clinic for Psychiatry, Psychotherapy, and Psychosomatics at the Hospital of Frankfurt Höchst; MEDIAN "Klinik am Südpark" Bad Nauheim; and "Parkland-Klinik" Bad Wildungen.

Conflict of interest Author Hanna Reich, Author Luisa Bockel, and Author Ricarda Mewes declare that they have no conflict of interest.

Informed consent All procedures followed were in accordance with the ethical standards of the responsible committee on human experimentation (institutional and national) and with the Helsinki Declaration of 1975, as revised in 2000. Informed consent was obtained from all patients included in the study.

References

1. Bhugra D. Migration and mental health. Acta Psychiatr Scand. 2004;109:243–58.

2. Agorastos A, Haasen C, Huber CG. Anxiety disorders through a transcultural perspective: implications for migrants. Psychopathology. 2012;45:67–77.
3. Kirmayer LJ, Narasiah L, Munoz M, Rashid M, Ryder AG, Guzder J, et al. Common mental health problems in immigrants and refugees: general approach in primary care. Can Med Assoc J. 2011;183: E959–67.
4. McDonald JT, Kennedy S. Insights into the "healthy immigrant effect": health status and health service use of immigrants to Canada. Soc Sci Med. 2004;59:1613–27.
5. Newbold KB. Self-rated health within the Canadian immigrant population: risk and the healthy immigrant effect. Soc Sci Med. 2005;60: 1359–70.
6. Aichberger MC, Schouler-Ocak M, Mundt A, Busch MA, Nickels E, Heimann HM, et al. Depression in middle-aged and older first generation migrants in Europe: results from the survey of health, ageing and retirement in Europe (SHARE). Eur Psychiatry. 2010;25: 468–75.
7. De Wit MAS, Tuinebreijer WC, Dekker J, Beekman AJTF, Gorissen WHM, Schrier AC, et al. Depressive and anxiety disorders in different ethnic groups: a population based study among native Dutch, and Turkish, Moroccan and Surinamese migrants in Amsterdam. Soc Psychiatry Psychiatr Epidemiol. 2008;43:905–12.
8. Kirmayer LJ, Young A. Culture and somatization: clinical, epidemiological, and ethnographic perspectives. Psychosom Med. 1998;60: 420–30.
9. Lindert J, Von Ehrenstein OS, Priebe S, Mielck A, Brähler E. Depression and anxiety in labor migrants and refugees—a systematic review and meta-analysis. Soc Sci Med. 2009;69:246–57.
10. Schraufnagel TJ, Wagner AW, Miranda J, Roy-Byrne PP. Treating minority patients with depression and anxiety: what does the evidence tell us? Gen Hosp Psychiatry. 2006;28:27–36.
11. Raleigh VS, Irons R, Hawe E, Scobie S, Cook A, Reeves R, et al. Ethnic variations in the experiences of mental health service users in England: results of a national patient survey programme. Br J Psychiatry. 2007;191:304–12.
12. Arnow B, Blasey C, Manber R, Constantino MJ, Markowitz JC, Klein DN. Dropouts versus completers among chronically depressed outpatients. J Affect Disord. 2007;97:197–202.
13. Statistisches Bundesamt [Federal Statistical Office]. [Population and employment. Population with migration background—results of the microcensus 2005]. Wiesbaden 2009.
14. Eurostat. Migrants in Europe: a statistical portrait of the first and second generation. Luxembourg: European Union 2011. doi:10.2785/5318.
15. Mösko M, Schneider J, Koch U, Schulz H. [Does a Turkish migration background influence treatment outcome? Results of a prospective inpatient healthcare study]. Psychother Psych Med. 2008;58:176–82.
16. Göbber J, Pfeiffer W, Winkler M, Kobelt A, Petermann F. [Inpatient health care treatment for patients of Turkish descent—special challenges and treatment results]. Zeitschrift für Psychiatr Psychol und Psychother. 2010;58:181–7.
17. Blum L. Motivation: escape to freedom, the important ingredient in short-term psychotherapy. Psychol Rep. 1988;63:381–2.
18. Franz M, Schiessl N, Manz R, Fellhauer R, Schepank H, Tress W. [Psychotherapy motivation and psychotherapy acceptance. Initial results of the Mannheim intervention study]. Psychother Psychosom Med Psychol. 1990;40:369–74.
19. Keithly LJ, Samples SJ, Strupp HH. Patient motivation as a predictor of process and outcome in psychotherapy. Psychother Psychosom. 1980;33:87–97.
20. Sifneos PE. Motivation for change a prognostic guide for successful psychotherapy. Psychother Psychosom. 1978;29:293–89.
21. Schneider W, Klauer T. Symptom level, treatment motivation, and the effects of inpatient psychotherapy. Psychother Res. 2001;11:153–67.
22. Nickel C, Muehlbacher M, Kettler C, Tritt K, Egger C, Lahmann C. [Treatment motivation and results of inpatient psychotherapy for women with depressive disorders: a prospective study]. Gesundheitswesen. 2006;68:11–7.
23. Klauer T, Maibaum F, Schneider W. [Patient and therapist reports of treatment motivation as predictors of dropout from inpatient psychotherapy]. Zeitschrift für Psychiatr Psychol und Psychother. 2007;55:59–66.
24. Calliess IT, Schmid-Ott G, Akguel G, Jaeger B, Ziegenbein M. [Attitudes towards psychotherapy of young second-generation Turkish immigrants living in Germany]. Psychiatr Prax. 2007;34:343–8.
25. Drieschner KH, Lammers SM, van der Staak CP. Treatment motivation: an attempt for clarification of an ambiguous concept. Clin Psychology Rev. 2004;23:1115–37.
26. Petrie KJ, Weinman J. Patients' perceptions of their illness: the dynamo of volition in health care. Curr Dir Psychol Sci. 2012;21:60–5.
27. Bhugra D. Cultural identities and cultural congruency: a new model for evaluating mental distress in immigrants. Acta Psychiatr Scand. 2005;111:84–93.
28. Kirmayer LJ, Sartorius N. Cultural models and somatic syndromes. Psychosom Med. 2007;69:832–40.
29. Kleinmann A. Patients and healers in the context of culture: an exploration of the borderland between anthropology, medicine, and psychiatry. Berkeley: University of California Press; 1980.
30. Bowling A. Beliefs about illness causation among Turkish and white British people living in a deprived inner London district. Health Educ Res. 1994;9:355–64.
31. Bäärnhielm S, Ekblad S. Turkish migrant women encountering health care in Stockholm: a qualitative study of somatization and illness meaning. Cult Med Psychiatry. 2000;24:431–52.
32. Franz M, Lujic C, Koch E, Wüsten B, Yürük N, Gallhofer B. [Subjective illness beliefs of Turkish migrants with mental disorders—specific characteristics compared to German patients]. Psychiatr Prax. 2007;34:332–8.
33. Kizilhan J. [Interaction of illness perception and coping with Turkish patients—a comparative study]. Verhal Verhal. 2008;29:352–66.
34. Karanci NA. Causal attributions for psychological illness among Turkish psychiatric in-patients and their relationships with hope. Int J Soc Psychiatry. 1986;32:3–12.
35. Rosenbaum R, Horowitz M. Motivation for psychotherapy: a factorial and conceptual analysis. Psychotherapy. 1983;20:346–54.
36. Autorengruppe Bildungsberichterstattung [author group educational reports]. Education in Germany 2012: An indicator-based report including analysis of cultural education in the life course. Bertelsmann: Bielefeld; 2012.
37. Woellert F, Kröhnert S, Sippel L, Klingholz R. Unused potentials: Current State of Integration in Germany. Berlin-Institut für Bevölkerung und Entwicklung [Berlin Institute for Population and Development] 2009. doi:10.1007/978-3-531-19010-5_8
38. Statistisches Bundesamt [Federal Statistical Office]. [Population and employment. Population with migration background - results of the microcensus 2010]. Wiesbaden: Statistisches Bundesamt 2011.
39. Erim Y, Morawa E, Özdemir DF, Senf W. [Prevalence, comorbidity and severity of psychosomatic disorders in outpatients with Turkish migration background]. Psychother Psychosom Medizinische Psychol. 2011;61:472–80.
40. Brislin RW, Lonner WJ, Throndike RM. Cross cultural research methods. New York: Wiley; 1973.
41. Schneider W, Basler HD, Beisenherz B. Questionnaire for the measurement of psychotherapy motivation: FMP. Beltz-Test: Weinheim; 1989.
42. Kroenke K, Spitzer RL, Williams JBW. The PHQ-9: validity of a brief depression severity measure. Prim Care. 2001;16:606–13.
43. Kroenke K, Spitzer RL, Williams JBW. The PHQ-15: validity of a new measure for evaluating the severity of somatic symptoms. Psychosom Med. 2002;64:258–66.
44. Kroenke K, Spitzer R, Williams J, Löwe B. The patient health questionnaire somatic, anxiety, and depressive symptom scales: a systematic review. Psychiatry Prim Care. 2010;32:345–59.

45. Henkel V, Mergl R, Kohnen R, Maier W, Möller HJ, Hegerl U. Identifying depression in primary care: a comparison of different methods in a prospective cohort study. BMJ. 2003;326:200–1.
46. Wittkampf K, Naeije L, Schene A, Huyser J, van Weert H. Diagnostic accuracy of the mood module of the patient health questionnaire: a systematic review. Psychiatry Prim Care. 2007;29:388–95.
47. Löwe B, Spitzer RL, Zipfel S, Herzog W. Gesundheitsfragebogen für Patienten [Health questionnaire for patients]. Karlsruhe: Pfizer; 2002.
48. Çorapçıoğlu A, Özer GU. Hasta sağlık anketi-9. Patient Heal Quest. Screeners. http://www.phqscreeners.com/pdfs/02_PHQ-9/PHQ9_Turkish for Turkey.pdf. Accessed 9 May 2012.
49. Pfizer Inc. Patient Health Questionnaires (PHQ) Screeners, official website. 2013.http://www.phqscreeners.com/overview.aspx?Screener=02_PHQ-9. Accessed 30 Aug 2013.
50. Yazici Güleç M, Güleç H, Simşek G, Turhan M, Aydin SE. Psychometric properties of the Turkish version of the patient health questionnaire—somatic, anxiety, and depressive symptoms. Compr Psychiatry. 2012;53:623–9.
51. Kroenke K, Spitzer RL, DeGruy FV, Swindle R. A symptom checklist to screen for somatoform disorders in primary care. Psychosomatics. 1998;39:263–72.
52. Broadbent E, Petrie KJ, Main J, Weinman J. The brief illness perception questionnaire. J Psychosom Res. 2006;60:631–7.
53. Moss-Morris R, Weinman J, Petrie K, Horne R, Cameron L, Buick D. The revised illness perception questionnaire (IPQ-R). Psychol Heal. 2002;17:1–16.
54. Oflaz SB. Kısa hastalık algı ölçeği. http://www.uib.no/ipq/. Accessed 9 May 2012.
55. Rief W. Fragebogen zur Krankheitswahmehmung (Kurzform). http://www.uib.no/ipq/. Accessed 9 May 2012.
56. Gaab J. Krankheitsannahmen (Illness Perception Questionnaire - R). http://www.uib.no/ipq/index.html. Accessed 9 May 2012.
57. Lohaus A, Schmitt GM. Locus of control inventory for illness and health. Göttingen: Hogrefe; 1989.
58. Cohen J. Statistical power analysis for the behavioral sciences. 2nd ed. Hillsdale: Erlbaum; 1988.
59. Grissom RJ, Kim JJ. Effect sizes for research: univariate and multivariate applications. 2nd ed. New York,: Taylor & Francis; 2012.
60. Preacher KJ, Hayes AF. Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. Behav Res Methods. 2008;40:879–91.
61. Mallinckrodt B, Abraham WT, Wei M, Russell DW. Advances in testing the statistical significance of mediation effects. J Couns Psychol. 2006;53:372–8.
62. Ferber L V, Köster I, Celayir-Erdogan N. [Turkish and German patients of general practitioners—diseases, drug expectations and drug prescriptions]. Gesundheitswesen. 2003;65:304–11.
63. Mocan-Aydin G. Western models of counseling and psychotherapy within Turkey: crossing cultural boundaries. Couns Psychol. 2000;28:281–98.
64. Machleidt W, Behrens K, Ziegenbein M. [Integration of immigrants into the mental health care system in Germany]. Psychiatr Prax. 2007;34:325–31.
65. Glaesmer H, Wittig U, Braehler E, Martin A, Mewes R, Rief W. Health care utilization among first and second generation immigrants and native-born Germans: a population-based study in Germany. Int J Public Health. 2011;56:541–8.
66. Raney S, Çınarbas D. Counseling in developing countries: Turkey and India as examples. J Ment Heal Couns. 2005;27:149–60.
67. Eskin M. Rural population's opinions about the causes of mental illness, modern psychiatric help-sources and traditional healers in Turkey. Int J Soc Psychiatry. 1989;35:324–8.
68. Minas H, Klimidis S, Tuncer C. Illness causal beliefs in Turkish immigrants. BMC Psychiatry. Published Online First: 2007. doi:10.1186/1471-244X-7-34.
69. Tuncer C. Mental illness in an Islamic–Mediterranean culture: Turkey. In: Al-Issa I, ed. *Handbook of culture and mental illness: an international perspective*. Madison, CT: International Universities Press 1995. 169–82.
70. Lester D, Castromayor IJ, Içli T. Locus of control, depression, and suicidal ideation among American, Philippine, and Turkish students. J Soc Psychol. 1991;131:447–9.
71. Ergüder Ü, Esmer Y, Kalaycioğlu E. Türk toplumunun degáerleri [Values inTurkish culture]. Istanbul, Turkey: Tüsiad Yayinlari, Tüsiad, publication number T/91, 6.145 1991.
72. Krause MS. A cognitive theory of motivation for treatment. J Gen Psychol. 1966;75:9–19.
73. Miller WR. Motivation for treatment: a review with special emphasis on alcoholism. Psychol Bull. 1985;98:84–107.
74. Raskin A. Factors therapists associate with motivation to enter psychotherapy. J Clin Psychol. 1961;17:62–5.
75. Fassaert T, de Wit MAS, Tuinebreijer WC, Verhoeff AP, Beekman ATF, Dekker J. Perceived need for mental health care among non-western labour migrants. Soc Psychiatry Psychiatr Epidemiol. 2009;44:208–16.
76. Behrens K, Machleidt W, Haltenhof H, Ziegenbein M, Calliess IT. [Somatization and vulnerability to offence in immigrants with mental disorders—evidence or eminence?]. Nervenheilkunde. 2008;27:639–43.
77. Mewes R, Rief W. [Are somatoform complaints and causal attributions in Turkish migrants associated with their cultural background or the migration itself?]. Zeitschrift für Medizinische Psychol. 2009;18:135–9.
78. Benish SG, Quintana S, Wampold BE. Culturally adapted psychotherapy and the legitimacy of myth: a direct-comparison meta-analysis. J Couns Psychol. 2011;58:279–89.
79. Van Loon A, van Schaik A, Dekker J, Beekman A. Bridging the gap for ethnic minority adult outpatients with depression and anxiety disorders by culturally adapted treatments. J Affect Disord. 2013;147:9–16.
80. Hinton DE, Rivera EI, Hofmann SG, Barlow DH, Otto MW. Adapting CBT for traumatized refugees and ethnic minority patients: examples from culturally adapted CBT (CA-CBT). Transcult Psychiatry. 2012;49:340–65.

7.3 STUDIE III: MANUSKRIPT, EINGEREICHT BEI *CULTURAL DIVERSITY & ETHNIC MINORITY PSYCHOLOGY*

Engaging Turkish immigrants in psychotherapy: Development and pilot RCT of a culture-tailored, web-based intervention

Running head: Engaging Turkish immigrants in psychotherapy

Hanna Reich, Daniela Zürn, and Ricarda Mewes

University of Marburg, Germany

Author Note.

Hanna Reich, Daniela Zürn, and Ricarda Mewes, Division of Clinical Psychology and Psychotherapy, Department of Psychology, University of Marburg, Marburg, Germany.

Ricarda Mewes is now at the Division of Clinical Biopsychology, Department of Psychology, University of Marburg, Marburg, Germany.

We would like to thank the cooperating clinic sites, namely: Vitos Clinic for Psychiatry and Psychotherapy Marburg (Medical Director: Prof. Dr. Dr. Matthias J. Müller), and Parkland Clinic Bad Wildungen (Medical Director: Dr. Hartmut Imgart). We also express our thanks to Dr. David Daniel Ebert and Dipl. Psych. Christian Rosenau for technical support and feedback during the development of the web-based interventions.

Correspondence concerning this article should be addressed to Ricarda Mewes, Division of Clinical Biopsychology, Department of Psychology at the University of Marburg, Gutenbergstrasse 18, 35032 Marburg, Germany. Tel.: +49-6421 282 4044, e-mail: mewesr@ uni-marburg.de

Engaging Turkish immigrants in psychotherapy

Abstract

Background: Conventional psychotherapy may be less successful in engaging immigrant and ethnic minority patients in treatment. However, culturally adapted psychotherapies can increase the success rate. In this regard, the integration of the patient's illness beliefs is a key element to improve treatment engagement and outcome. Therefore, we developed a culture-tailored intervention to engage immigrant inpatients in psychotherapy, and tested its acceptance and usefulness in a pilot RCT.

Methods: The engagement intervention (EI) was developed in a web-based manner using principles of Motivational and Ethnographic Interviewing. It was tested using an experimental control group design (active control condition: progressive muscle relaxation) in a sample of Turkish immigrant inpatients in Germany ($N = 26$). Illness perception, illness-related locus of control, and self-efficacy were assessed pre and post intervention.

Results: The EI was rated better than the control condition ($p = .001$). In particular, participants in the EI felt better prepared for therapy ($p = .008$). By working with the EI, self-efficacy increased ($p = .024$) and external-fatalistic control beliefs diminished ($p = .021$).

Limitations: The pilot RCT was based on a small sample. Half of the participants needed assistance in using the computer and web-based interventions.

Conclusions: The developed EI provides a first step towards feasible culture-tailored psychotherapeutic elements that can be integrated into routine clinical care. The first results regarding acceptance and usefulness are promising.

Keywords

Engagement intervention, Turkish immigrants, motivational interviewing, web intervention

Engaging Turkish immigrants in psychotherapy

Psychotherapy is a well-established, powerful and effective treatment for many mental disorders (e.g. Butler et al., 2006). However, in immigrant and ethnic minority populations, psychotherapeutic treatment is more complex to deliver (Priebe et al., 2011; Schmeling-Kludas, Fröschlin, & Boll-Klatt, 2003) and may be less successful. In the USA, patients with ethnic minority status are at higher risk of dropout from treatment than other groups (Arnow et al., 2007). Moreover, Asian patients in the UK and the USA more often report negative experiences of mental health services and have poorer short-term outcomes than Caucasian patients (Raleigh et al., 2007; Zane, Enomoto, & Chun, 1994). Likewise, Turkish immigrant patients in Germany showed worse treatment outcomes than non-immigrant patients (Göbber, Pfeiffer, Winkler, Kobelt, & Petermann, 2010; Mösko, Schneider, Koch, & Schulz, 2008). At the same time, psychological distress and disorders are higher in minority populations than in the general population (Aichberger et al., 2010; Bhugra, 2004; de Wit et al., 2008; González, Tarraf, Whitfield, Vega, & González, 2010; Sariaslan, Morawa, & Erim, 2014). Thus, the question arises how treatment engagement and success can be promoted in immigrant and ethnic minority populations.

Various reasons for inferior treatment outcomes among immigrant populations have been discussed in the literature. First, treatment is frequently not initiated until symptoms become severe (Melfi, Croghan, Hanna, & Robinson, 2000). In addition, socioeconomic stressors (e.g. lower education, unemployment) are common among immigrant populations (Priebe et al., 2011) and may negatively impact mental health treatment (Mösko et al., 2008). Moreover, conventional psychotherapy may not be sufficiently specific and may be incongruent with the cultural values and worldviews of ethnic minorities (Koch, Hartkamp, Siefen, & Schouler-Ocak, 2008; Mösko et al., 2008; Priebe et al., 2011; Sue, Arredondo, & McDavis, 1992; Wrenn, 1962). In this regard, unfavorable treatment expectations, different expectations about the roles of doctors/ psychotherapists and patients, and different understandings of illness and treatment can result in low motivation for psychotherapy (Drieschner, Lammers, & van der Staak, 2004; Göbber et al., 2010; Priebe et al., 2011; Reich, Bockel, & Mewes, 2015). Last but not least: Even if language is not crucial for the delivery of culturally appropriate psychotherapy (Benish, Quintana, & Wampold, 2011), the patient must be able to understand what is being said within an intervention. No or restricted access to interpreting services

causes problems in immigrants' health care throughout Europe (Priebe et al., 2011). For instance, Turkish immigrants in Germany report language problems and difficulties obtaining medical information when hospitalized (Giese, Uyar, Uslucan, Becker, & Henning, 2013).

Fortunately, some of these factors can be addressed at the beginning and in the course of treatment. Meta-analytic evidence shows that culturally adapted psychotherapy is more effective than unadapted therapy, and that the adaptation of the "illness myth" (i.e., the subjective concepts of illness) is the key moderator for a superior outcome (Benish et al., 2011). It is particularly important that the patient's explanations of illness are embedded into a therapeutic explanatory model (Frank & Frank, 1993; Wampold, 2007). Patients' "illness myths" include, among other things, treatment expectations and self-efficacy beliefs that influence the motivation for psychotherapy and treatment outcome (Bandura, 1977, 2001; Drieschner et al., 2004; Fliege, Rose, Bronner, & Klapp, 2002; Hagger & Orbell, 2003). Both variables, subjective illness concepts and self-efficacy, can be changed by psychological interventions such as Motivational Interviewing (Miller & Rollnick, 1991; K. J. Petrie & Weinman, 2012; Rollnick, Miller, & Butler, 2008).

Swartz and colleagues (2007) propose an integration of techniques from Motivational Interviewing (MI) and Ethnographic Interviewing to engage patients from ethnic minorities in psychotherapy. MI is a "directive, client-centered counseling style for eliciting behavior change by helping clients to explore and resolve ambivalence" (Miller & Rollnick, 1991). It is effective in a broad range of behavioral problems and diseases (Rubak, Sandbæk, Lauritzden, & Christensen, 2005), and is particularly helpful in clients from ethnic minority groups (Hettema, Steele, & Miller, 2005; Lundahl, Kunz, Brownell, Tollefson, & Burke, 2010). Complementing MI, Ethnographic Interviewing focuses on the patient's cultural background, including perceptions of the world and its nature, values, and faith (Westby, 1990). In this regard, it encourages the patient to share his/her own "narrative", the adaptation of which Benish and colleagues (2011) found to be the key to a superior outcome in culturally adapted psychotherapy.

In conclusion, it can be stated that there is a great need for psychological interventions that enhance treatment engagement in immigrant patients. However, culturally adapted, standardized interventions are largely lacking. The objective of the present study was to develop a culture-tailored,

web-based intervention module based on MI and Ethnographic Interviewing techniques, which can be integrated in routine clinical care without major expense. The intervention was aimed to engage immigrant patients in psychotherapy at the beginning of their inpatient treatment. In this respect, we followed the demands of specific treatment services and a more socio-cultural orientation of mental health treatments (Bäärnhielm, Jávo, & Mösko, 2013; Mösko et al., 2008; Priebe et al., 2011). Moreover, the acceptance and usefulness of the intervention was tested via a randomized controlled trial in a sample of Turkish immigrant inpatients. Turkish immigrants comprise the largest minority group in Germany (German Federal Statistical Office, 2014), and are among the largest three immigrant populations in other European countries (Eurostat, 2011).

We hypothesized that patients working with the engagement intervention (EI) would feel better prepared for therapy and be more strongly motivated to engage in therapy than those working with the active control condition. Further hypotheses were that a threatening illness perception and external-fatalistic control beliefs would be reduced after using the EI, while personal and treatment control beliefs and self-efficacy would be stronger after using the EI than before.

Materials and methods

1) Development of the engagement intervention (EI)

The EI was named "Sağlığa Doğru" (Turkish for "Path to Health"). Inspired by the work of Swartz and colleagues (2007), the intervention is organized into five sections and based on the principles of MI and Ethnographic Interviewing. Unlike Swartz's approach, which is based on conversations between therapist and patient, we developed our intervention as a web-based, standardized program in German and Turkish language versions. Thereby, we followed the example of Osilla and colleagues (2012), who demonstrated how to implement and deliver a culturally relevant MI intervention successfully on the web.

We chose a web-based approach with an interactive interface because while most hospitals in Germany treat patients of Turkish origin with frequently poor knowledge of German, Turkish-speaking therapists are generally not available. Throughout the entire intervention, the patient was provided with photos, texts and videos of a sample patient and a sample therapist, with the aim of

helping the patient to identify with the intervention and its contents and to enhance the personal relevance. Accordingly, in a future phase of implementation, it will be possible to use the intervention without a Turkish-speaking therapist available – either under the guidance of a Turkish-speaking non-therapist (e.g. nursing staff) or with the patient alone in the case of sufficient computer skills.

The EI and the active control intervention were translated into the Turkish language with the help of five Turkish native speakers, following the forward-backward translation procedure (Brislin, Lonner, & Throndike, 1973). Thereafter, all materials were reviewed again to eradicate linguistic or content-based errors. This procedure should ensure a high level of similarity between the language versions in literal and linguistic terms.

Summary of the contents

"Sağlığa Doğru" was designed to provide patients with information and ideas on how to benefit from the therapies offered in inpatient treatment. The main goal was to enable the patient to accept psychotherapy as a culturally appropriate healing practice and thereby increase the benefit from the therapies offered. At the beginning of the intervention, the patient receives a short introduction to the structure and elements of the intervention. The EI consists of five sections, which will be briefly presented below. A structured overview is also provided in Table 1.

The first section, "My story", displays a video in which a sample patient talks to a sample therapist about his symptoms, illness beliefs, and the social consequences of the illness. Then, the patient is asked about his/her symptoms, illness beliefs, and social consequences. The aim is for the patient to feel accepted, understood, and taken seriously regarding his/her individual history. Finally, the patient is encouraged to set individual goals for the inpatient treatment, in order to achieve a positive general orientation.

The second section "Treatment – what do I already know?" deals with the patient's previous treatment experiences. Based on these experiences, the patient can specify wishes for the current treatment. The professional help offered in the hospital is introduced as support in addition to the patient's own resources, such as the family, thereby validating the patient's own resources and also integrating professional mental health treatment into the patient's support system.

In section three, "Psychotherapy can help", psychotherapy is introduced as an efficient and effective treatment. To this end, educational material about the concept, process, and efficacy of psychotherapy is provided. Additionally, a video shows how the sample patient and therapist work together to develop a rationale for psychotherapeutic treatment, integrating culture-specific causal illness attributions (e.g. genetic predisposition, family stress, punishment from God, problems dealing with emotions). Positive outcome expectancies regarding treatment success are encouraged by providing feedback with reference to previous information entered by the patient.

Section four, "Possible obstacles", gives the patient scope to express concerns about his/her treatment. In addition to practical obstacles (e.g. worries about being away from family during inpatient treatment, unfamiliar food, difficulties to comply with religious requirements in the inpatient setting), psychological and cultural barriers that may hamper participation in the therapy (e.g. being ashamed of symptoms, being seen as "crazy") are addressed. Feedback is given that such concerns are quite common, and the patient is encouraged to talk about his/her concerns with his/her therapist.

The aim of the final section, "Next steps", is to strengthen the patient's commitment to engage in treatment. After a brief summary of the previous contents, the patient is asked to write down his/her individual goals for the inpatient treatment as concretely as possible, and what he/she can do to achieve them. For further information on the manual of the EI, please contact the first author.

-- Insert Table 1 here –

Motivational Interviewing (MI) and Ethnographic Interviewing elements

The EI was informed by principles of MI and Ethnographic Interviewing. The patient working with the program was asked about his/her motivation for treatment and change and his/her story, using open-ended questions and empathic feedback (cf. Table 1, sections 1, "My story", and 5, "Next steps"). Natural resistance to change was integrated into the intervention (see section 4, "Possible obstacles") by actively addressing possible barriers and concerns of the patient without judgment. Instead, the patient's concerns were validated (by written feedback) and he/she was encouraged to actively talk about these concerns with his/her therapist. This should enable resistance to be redirected into an active client behavior in actual therapy sessions. A further goal informed by principles of MI was patient empowerment, which constituted a particular aim of sections 2 and 3 of the intervention.

Knowledge about the treatment offered and an evaluation of previous treatment experiences were stimulated, as this forms the basis for informed decision making in the current treatment.

Moreover, principles of Ethnographic Interviewing helped us to focus on the cultural background of Turkish immigrants living in Germany, especially their values and faith. We resolved the issue of integrating typical values without over-generalizing by having the sample patient describe some issues prevalent in Turkish immigrants (e.g. high relevance of religious beliefs and "punishment from God" as a causal illness attribution), and subsequently asking the patient to rate how relevant the respective attribution or concern was to him/her (see sections 3 and 4, Table 1). Encouragement to tell one's own individual story and to actively talk about one's own illness beliefs was given at various points throughout the intervention.

Cultural adaptations

In order to plan and evaluate the cultural adaptations, we used the parameters recently suggested by Hinton and Jalal (2014) to create culturally sensitive CBT interventions (e.g. identifying the cultural group, culturally appropriate framing of CBT techniques, identifying and addressing key stressors, incorporating key local sources of recovery and resilience). The EI was culturally adapted in terms of its surface structure, e.g. the use of the native language and an ethnically matched therapist, as well as its deep structure, involving the incorporation of cultural ideas, beliefs, and values (Barrera, Castro, Strycker, & Toobert, 2013; Hwang, 2011; Resnicow, Braithwaite, Ahluwalia, & Baranowski, 1999). Deep structure adaptations were made regarding those ingredients of psychotherapy that make it a culturally accepted "healing practice" according to Frank and Frank (1993): A trustful relationship between patient and therapist was modeled by the sample patient and therapist in video sequences. The therapist was embedded in the program giving meaningful feedback and comprehensive information, to foster the image of a capable "healer". A common rationale for illness was developed by way of example in a video session, in which we deliberately integrated a variety of causal illness attributions which have been previously shown to be culturally relevant (Eskin, 1989; Franz et al., 2007; Kizilhan, 2008; Minas, Klimidis, & Tuncer, 2007; Reich et al., 2015; Tuncer, 1995). To strengthen beliefs about the effectiveness of psychotherapy, general information was provided, along with a personalized example of a patient who got better following psychotherapy. Further surface structure cultural

adaptations included the Turkish name "Sağlığa Doğru", which was used in all presentations and materials (also the German ones). Moreover, we provided a complete Turkish language version, for which idiomatic expressions and German standard terms had been carefully translated. In addition, names and identities of sample patient and therapist were informed by Turkish immigrants living in Germany, meaning that, for instance, a higher relevance of the family and religion were taken into account. Comprehensibility for persons with low literacy was also an important goal, as many Turkish immigrants in Germany have a poor educational background (German Federal Statistical Office, 2014; Woellert, Kröhnert, Sippel, & Klingholz, 2009). Therefore, as much information as possible was delivered using video, audio, or graphics, and sentences were kept short and grammatically simple.

Active control condition

The active control condition consisted of an applied progressive muscle relaxation (PMR). The structure and nature of the PMR was adjusted to the EI. Accordingly, it was offered in a web-based manner, using the same content management system as for the EI. The design was interactive, and patients were addressed directly. In videos, the same sample patient gave illustrative information and examples, as in the EI, and reported on his experience with the relaxation process.

The content and structure of the intervention were introduced first. In the first section, "Basic principles of relaxation", the purpose and principles of the muscle and breathing relaxation were presented. In addition, the patient could select answers to further questions regarding the relaxation technique. In section two, "My muscle and breathing relaxation", the patient was given the opportunity to participate in a 15-minute PMR audio relaxation session with specific instructions. Then, the patient was asked about his/her positive and negative experiences with the relaxation, with the sample patient providing example answers. The program concluded with further information and suggestions on how to transfer the relaxation exercise to everyday life.

2) Pilot RCT

Participants in the RCT and Setting

Participants for the RCT were recruited between August 2013 and March 2014 in two psychiatric hospitals in the Federal State of Hesse, Germany. We included adult inpatients with a

Turkish migration background and an ICD-10 F3 or F4 principal diagnosis (depressive, somatoform, anxiety, or adjustment disorder). Migration status was defined by the parents' country of birth (Schenk et al., 2006). Patients with bipolar disorders, acute psychosis, substance abuse disorder, neurodegenerative diseases, and primary diagnosis of an eating disorder were excluded. Both hospitals offer specialized services (i.e. treatment in native language, working with trained interpreters) for Turkish immigrant inpatients and treat about six to eight patients of Turkish origin concurrently. On average, there is one new referral of a Turkish patient per week. In Germany, patients are referred to inpatient treatment by their general practitioner or psychiatrist. Study trials took place at the beginning of the inpatient treatment, i.e. in the first or second week of treatment. The psychiatric hospitals provided facilities to perform trials undisturbed and in privacy.

Procedures

The study was based on an experimental control group design (see Figure 1) in order to test the feasibility and usefulness of a culture-tailored, web-based EI. While the experimental group (EG) was working with the EI, the active control group (CG) was working with a web-based PMR. Before working with the interventions, participants completed questionnaires to assess socio-demographic and clinical characteristics. Afterwards, they answered questions concerning the acceptance and feasibility of the interventions, and usefulness in terms of treatment-related variables. The institutional review board of the Department of Psychology, Marburg University, Germany, reviewed and gave ethic approval to the study protocol. All participants provided written informed consent.

Patient flow and randomization

In both of the participating psychiatric hospitals, the practitioners received training on study goals, process, and inclusion criteria. The treating physicians and psychologists invited suitable inpatients to participate in the study. Interested patients were then informed about the objectives, content, process and privacy terms of the study. They received written participant information and the informed consent forms, either in Turkish or German. In case of willingness to participate, inpatients handed over the signed informed consent form to their practitioner. A code was then assigned to the participant to ensure anonymity.

During the study period, nearly all eligible patients were contacted (about 95%; see figure 1). About 60% of the contacted patients participated in the study. Reasons named for non-participation were shame, the current mental state, the duration of the study, lack of reading ability or lack of schooling, little experience in using computers, and the planned storage of study data. During the first half of the study period, participants were randomly assigned to the experimental conditions. In the second half, groups were gender-matched in order to prevent a bias in the results due to an unequal gender distribution. Thus, the internal validity of the study was increased. Three patients dropped out shortly after the initiation of the study trial. Reasons for discontinuation were exhaustion, as well as language and problems with the contents of the questions. The final total study sample comprised $N =$ 26 inpatients.

Process of the study trials

Participants could choose their preferred language, as all instruments and both interventions were provided in German and Turkish. They completed all questionnaires and the intervention on a computer in the presence of a bilingual research assistant (D.Z.). The research assistant was ready to provide help at any time, while paying attention to ensure standardized test conditions. Written instructions were given for the individual parts of the study. The participants were allowed to take a break or discontinue trials at any time without any consequences. To make participation more comfortable, all questionnaires (see below) were completed in a morning session. In the afternoon, participants worked with the intervention, provided feasibility feedback, and completed the questionnaires for the post-assessment.

Measures

Socio-demographic, migration-related and clinical characteristics were assessed at the beginning of study trials. Questionnaires about illness concept and self-efficacy (Brief IPQ, IPQ-R Personal and Treatment Control Scales, KKG External-fatalistic Control Scale, and SWE) were applied before and after the intervention to assess the usefulness of the interventions in terms of treatment-related variables. The clinical diagnoses were reported by the treating physician or psychologist after patients had given written consent. All self-rating questionnaires were provided on a computer in German or Turkish according to the participants' choice. For the questionnaires PHQ-15, IPQ-R Causal Illness

Attributions, and KKG, no authorized Turkish version was available. Therefore, they were translated into the Turkish language following the forward- and backward-translation method (Brislin et al., 1973).

The Patient Health Questionnaire Depressive, Somatic, and Anxiety Symptom Scales (PHQ-9, PHQ-15, GAD-7)

Scales from the Patient Health Questionnaire (PHQ) (Kroenke, Spitzer, Williams, & Löwe, 2010; Spitzer, Kroenke, & Williams, 1999) were applied for the dimensional assessment of clinical characteristics. German and Turkish versions are available online (Pfizer Inc., 2013), with the exception of the Turkish version of the PHQ-15, which was translated as described above.

The severity of depressive symptoms was measured with the PHQ-9 (Kurt Kroenke, Spitzer, & Williams, 2001). Its nine items assess depressive symptoms in the last two weeks according to the DSM-IV criteria (American Psychiatric Association, 1994). Response categories range from 0 ("not at all") to 3 ("nearly every day"); sum scores range from 0 to 27. The PHQ-9 is highly sensitive and specific for the identification of depressive disorder (Henkel et al., 2003; Wittkampf, Naeije, Schene, Huyser, & van Weert, 2007). The validity of the German version (Bernd Löwe, Spitzer, Zipfel, & Herzog, 2002) has been repeatedly proven (Henkel et al., 2004; Bernd Löwe, Kroenke, Herzog, & Gräfe, 2004; Bernd Löwe, Gräfe, et al., 2004; Bernd Löwe, Spitzer, et al., 2004; Martin, Rief, Klaiberg, & Braehler, 2006). Reliability and validity of the Turkish version (Çorapçıoğlu & Özer, n.d.) is acceptable (Yazici Güleç, Güleç, Simşek, Turhan, & Aydin Sünbül, 2012). Sum scores from the German and Turkish PHQ-9 versions are fully comparable (Reich et al., submitted).

Somatoform symptoms were assessed using the PHQ-15 (K Kroenke et al., 2010; K. Kroenke, Spitzer, & Williams, 2002). This 15-item checklist assesses somatic symptoms typical for primary care patients (e.g. back pain, headache, chest pain) (K Kroenke, Spitzer, DeGruy, & Swindle, 1998). The items about menstrual pain and pain during sexual intercourse were omitted since they were considered as culturally inappropriate. One item about health concerns was added from the PHQ-D (Bernd Löwe et al., 2002). Considering the last four weeks, the severity of each symptom can be rated from 0 ("not bothered at all") to 2 ("bothered a lot"); sum scores range from 0 to 28 in the present

study. The German version (Bernd Löwe et al., 2002) was found to be valid and well accepted (Gräfe, Zipfel, Herzog, & Löwe, 2004).

The Generalized Anxiety Disorder Scale (GAD-7) (Spitzer, Kroenke, Williams, & Löwe, 2006) measures the frequency of anxiety symptoms during the last two weeks using seven items. While it was originally developed for the screening of generalized anxiety disorder, it also covers panic disorder, social anxiety disorder, and posttraumatic stress disorder (K Kroenke et al., 2010). Response categories range from 0 ("not at all") to 3 ("nearly every day"); sum scores range from 0 to 21. The German version has been shown to be reliable and valid (B Löwe, Decker, & Müller, 2008).

The Brief Illness Perception Questionnaire (Brief IPQ)

The Brief IPQ assesses the cognitive and emotional representations of illness (Broadbent, Petrie, Main, & Weinman, 2006). It consists of nine items, each representing one scale of the more detailed IPQ-R (Moss-Morris et al., 2002). Response options range from 0 to 10, and labeled endpoints are given. Item 9 (illness causes) has an open response format and was not used in this study. Sum scores range from 0 to 80, with higher scores indicating a more pessimistic and threatening illness representation. Broadbent and colleagues (2006) demonstrated that the Brief IPQ is a reliable and valid tool to assess illness perceptions. Turkish and German versions of the Brief IPQ are available (Oflaz, n.d.; Rief, n.d.).

The Revised Illness Perception Questionnaire (IPQ-R) Personal and Treatment Control Scales

To assess control beliefs in depth, we applied the scales Personal Control (six items) and Treatment Control (five items) from the IPQ-R (Moss-Morris et al., 2002). These scales assess the individual's assumed self-efficacy and efficacy of treatments, respectively, for controlling the disorder. Response options range from 1 ("strongly disagree") to 5 ("fully agree"). On both scales, high values represent a positive view regarding the controllability of the disease. The IPQ-R is a well-established questionnaire that has been applied in a variety of patients with somatic and psychological complaints (Baines & Wittkowski, 2013). Reliability and validity have been confirmed for the original (Moss-Morris et al., 2002) as well as for the German version (Gaab & Ehlert, 2005). German (Gaab & Ehlert, 2005; Latanzio-Bunschoten, 2003) and Turkish versions (Arnay, 2006) of the IPQ-R are available online (Weinman, Petrie, Moss-Morris, Broadbent, & Sivertsen, n.d.).

Locus of Control Inventory for Illness and Health (KKG) External-fatalistic Control Scale

The KKG scale External-fatalistic control (Lohaus & Schmitt, 1989) extends the assessment of control beliefs with an aspect that is especially relevant in Turkish immigrant populations (Bowling, 1994; Franz et al., 2007; Kizilhan, 2008; Reich et al., 2015): It captures the extent to which a patient is convinced that his/her complaints depend on chance, fate, or luck. The seven items of this scale are answered from 1 ("not at all") to 6 ("fully agree"); sum scores range from 7 to 42. Higher values indicate a higher conviction of external-fatalistic control of the illness. Acceptable reliability and validity has been shown (Lohaus & Schmitt, 1989). The Turkish version was translated as described above.

Generalized Self-efficacy Scale (SWE)

Based on ten items, the SWE (Schwarzer & Jerusalem, 1995) measures an optimistic anticipation of one's competence to cope with a situation successfully. It shows convincing evidence of validity and good psychometric properties (Luszczynska, Scholz, & Schwarzer, 2005; Scholz, Doña, Sud, & Schwarzer, 2002). Response options range from 1 ("not at all true") to 4 ("exactly true") and sum scores range from 10 to 40. The reliability of the German (Jerusalem, Schwarzer, & Swe, 1999) and Turkish version (Yeşilay, Schwarzer, & Jerusalem, n.d.) is satisfactory (Luszczynska, Gutiérrez-Doña, & Schwarzer, 2005; Luszczynska, Scholz, et al., 2005).

Statistical analyses

For sample comparisons between the experimental and the active control condition in terms of socio-demographic, clinical, and feasibility variables, *t*-tests and X^2 tests were used as appropriate. Contrast analyses for dependent samples (pre-post) were used to assess the usefulness of the EI (EG only) with regard to treatment-related variables. Contrast analyses provide higher statistical power, which is especially important when analyzing small samples. Furthermore, effects as reported from contrast analyses are better interpretable and standardized effect sizes are given as Hedge's g (Hedges, 1981). Statistical power was calculated with G*Power (Faul, 1992). Statistical analyses were conducted using SPSS 21 for Windows.

Results

Participants

The sample consisted of $N = 26$ Turkish immigrant inpatients. Study sample characteristics are presented in Table 2. There were no statistically meaningful differences between the experimental group (EG) and the control group (CG) in terms of socio-demographic and clinical characteristics. The mean age was 48 ± 6 years, and 50% of the participants were female. On average, participants had received 7 ± 3 years of schooling and approximately 60% were employed in a part-time or full-time job. Self-reported German language proficiency was moderate, even though 29 ± 8 years had passed since immigration and two participants were born in Germany. The most frequent main diagnosis was depression (77%), followed by somatoform disorder (15%), and stress or adjustment disorder (8%). About 70% of participants had one or more comorbid diagnoses. In line with Kroenke and colleagues (2010), the dimensional assessments showed that depressive, somatic and anxiety symptoms were severe among the participating inpatients (mean scores: PHQ-9 = 18 ± 4, PHQ-15 = 18 ± 4, GAD-7 = 18 ± 4).

-- Insert Table 2 here –

Acceptance and feasibility

The overall rating for the EI (experimental group) was better than for the active control group (CG) (see Table 3). In particular, participants felt better prepared for therapy after working with the EI. However, participants in the two groups showed similar levels of endorsement of the items 'being motivated to engage in therapy' and 'recommend this tool to other patients'.

Only half of the participants were able to use the interventions without assistance, regardless of the experimental condition. However, those who used the interventions by themselves indicated that they were very easy to handle. Participants in the EG worked for longer with their intervention than participants in the CG (see Table 3).

-- Insert Table 3 here –

Usefulness of the EI regarding treatment-related variables

In accordance with the hypotheses, threatening illness beliefs and endorsement of an external-fatalistic locus of control decreased after using the EI (see Table 4). In line with Cohen (1988), the effect sizes were small (threatening illness beliefs: g = 0.43; low statistical power of testing) to medium (external-fatalistic locus of control: g = 0.60; acceptable statistical power of .68). As expected, the perception of personal and treatment control beliefs was higher after using the EI, but only the increase in expected self-efficacy was statistically significant. The effects on personal and treatment control beliefs were small (g = 0.20 to 0.34) and were based on low statistical power. However, the effect on self-efficacy was medium (g = 0.58), with an acceptable statistical power (.66).

-- Insert Table 4 here –

Discussion

The aim of the present study was to develop and evaluate a culture-tailored intervention to engage Turkish immigrant inpatients in psychotherapy. The intervention was developed in a web-based manner applying principles of Motivational and Ethnographic Interviewing. In a pilot RCT, the engagement intervention (EI) was rated better than the active control condition (web-based PMR), in particular concerning a better preparedness for psychotherapy. Contrary to our hypothesis, there was no group difference in the more general statement 'being motivated to engage in therapy'. However, pilot analyses showed that self-efficacy and – to a smaller extent – personal and treatment-related control beliefs improved through working with the EI, while a threatening illness perception and external-fatalistic control beliefs diminished.

The overall rating of the EI was very good. Positive feedback on a multicultural, web-based MI intervention has been reported previously, with particularly important advantages including less shame, embarrassment, and discomfort compared to face-to-face group interventions (Osilla et al., 2012). In line with our findings, excellent feasibility ratings for web-based interventions have been demonstrated in various other samples (Boeschoten et al., 2012; Davidson et al., 2014; Ebert et al., 2013; Poole, Simpson, & Smith, 2012; Todd, Jones, Hart, & Lobban, 2014; Webber, Tate, & Quintiliani, 2008). The positive feasibility ratings provide encouragement for proceeding with the development of web-based interventions for Turkish immigrants and other minorities. Global mental

health researchers (e.g. Rebello, Marques, Gureje, & Pike, 2014) consider the use of technological platforms as a strategy with great potential to expand mental health coverage and address major barriers to mental healthcare, which still exist for immigrants in Europe (Priebe et al., 2011).

The short-term improvements in self-efficacy and personal control beliefs indicate the EI's capability to strengthen the belief in one's own coping abilities. The respective components could be extended in the further development of the EI in order to provide the basis for a longer-lasting improvement. The beliefs that health depends on chance, fate, or luck diminished after working with the EI. However, even though the illness perception was *less* threatening, it remained in the range of a rather pessimistic and threatening concept of disease. Such an illness perception is associated with poor psychological health and low motivation for psychotherapy (Petrie & Weinman, 2012; Scharloo et al., 1998). While this highlights the relevance of the EI, it also suggests that continuous work is needed to achieve changes in illness perception (e.g. Petrie, Perry, Broadbent, & Weinman, 2012).

The present study demonstrated that a web-based intervention is applicable even in a group of relatively low-educated immigrants. A limiting factor and important side result of our study was that half of the sample was unable to use the computer and the web-based interventions on their own. This suggests, for instance, that the support of nurses would be helpful for less-educated persons. Interestingly, a recent meta-analysis on premature discontinuation in adult psychotherapy showed that low education was a predictor of dropout, while race (Caucasian vs. non-Caucasian) was not (Swift & Greenberg, 2012). In our sample, low education is probably the underlying problem, which unfolds here in the context of migration. This also highlights the importance of educational material for immigrants in order to increase mental health literacy. In an international survey, fourteen out of 16 European countries suggested educational programs as a requirement for good practice (Priebe et al., 2011). In our study, patients working with the progressive muscle relaxation technique (i.e., the control condition) provided oral feedback to the research assistant that they ultimately understood the meaning of the relaxation training, which is usually conducted in German and is mandatory in inpatient treatment. This observation is consistent with findings that preparatory interventions in advance of inpatient treatment improve knowledge and reduce tension among patients (Best et al.,

2009; Bischoff, Gönner, Ehrhardt, & Limbacher, 2005). Further research is needed to gain a more sophisticated understanding of the reciprocal influences of migration and education in psychotherapy.

Strengths and limitations

This pilot study comprised a small sample, which limits the generalizability of the present findings. Most Turkish-language versions of the questionnaires have not been culturally validated, which might compromise reliability and validity. Consequently, the findings regarding treatment-related variables need to be interpreted with caution. Furthermore, the statistical approach for the analysis of usefulness (i.e. contrast analysis for dependent samples) aimed to highlight some effects. However, a sufficiently powered omnibus test including the values of the control condition would be desirable.

The evident limitations notwithstanding, this study provided a novel approach to fostering the engagement of an immigrant population in psychotherapy. We managed to include a population that is difficult to assess and usually excluded from research due to language barriers. Patients and clinical staff rewarded the idea of the study with positive feedback.

Implications for research and clinical practice

We learned from the meta-analysis conducted by Benish and colleagues (2011) that cultural adaptations, i.e. the integration of the patient's individual illness beliefs, improve the outcome of psychotherapy for ethnic minority and immigrant patients. The present pilot study gave an example of how to adapt educational information and foster treatment engagement in Turkish immigrant inpatients in Germany in a one-session, web-based intervention. While we found promising first results, the effect of the EI on actual treatment engagement and treatment outcome is still to be evaluated. Further evaluation is also needed regarding whether a one-session intervention is sufficient, or whether more sessions are necessary to create a reliable effect regarding treatment engagement. The interventions were developed in a web-based manner due to the knowledge of language barriers between Turkish immigrant inpatients in Germany and the mostly native German psychotherapists. The implementation of web-based, culturally adapted interventions might be realized using resources such as Turkish nursing staff helping patients to work with the interventions in the case of

unfamiliarity with the web and computers (e.g. Rebello, Marques, Gureje, & Pike, 2014). In the long term, more diversity in the education and training of psychotherapists would be desirable.

References

Aichberger, M. C., Schouler-Ocak, M., Mundt, A., Busch, M. A., Nickels, E., Heimann, H. M., … Rapp, M. A. (2010). Depression in middle-aged and older first generation migrants in Europe: results from the Survey of Health, Ageing and Retirement in Europe (SHARE). *European Psychiatry*, *25*(8), 468–475. http://doi.org/10.1016/j.eurpsy.2009.11.009

American Psychiatric Association, [APA]. (1994). Diagnostic and Statistical Manual of Mental Disorders DSM-IV. Washington, DC: American Psychiatric Publishing.

Armay, Z. (2006). Reliability and Validity Study of the Turkish version of Illness Perception Questionnaire-R. Istanbul: Istanbul University, Institute of Health Science, Preventive Oncology Department.

Arnow, B. a, Blasey, C., Manber, R., Constantino, M. J., Markowitz, J. C., Klein, D. N., … Rush, a J. (2007). Dropouts versus completers among chronically depressed outpatients. *Journal of Affective Disorders*, *97*(1-3), 197–202. http://doi.org/10.1016/j.jad.2006.06.017

Baines, T., & Wittkowski, A. (2013). A systematic review of the literature exploring illness perceptions in mental health utilising the self-regulation model. *Journal of Clinical Psychology in Medical Settings*, *20*(3), 263–274. http://doi.org/10.1007/s10880-012-9337-9

Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review*, *84*(2), 191–215.

Bandura, A. (2001). Social Cognitive Theory: An Agentic Perspective. *Annual Review of Psychology*, *52*(1), 1–26. http://doi.org/10.1146/annurev.psych.52.1.1

Barrera, M., Castro, F. G., Strycker, L. a, & Toobert, D. J. (2013). Cultural adaptations of behavioral health interventions: A progress report. *Journal of Consulting and Clinical Psychology*, *81*(2), 196–205. http://doi.org/10.1037/a0027085

Benish, S. G., Quintana, S., & Wampold, B. E. (2011). Culturally adapted psychotherapy and the legitimacy of myth: a direct-comparison meta-analysis. *Journal of Counseling Psychology*, *58*(3), 279–289. http://doi.org/10.1037/a0023626

Best, M., Lange, M., Karpinski, N., Hessel, A., Söpper-Terborg, B., Sieling, W., & Petermann, F. (2009). [Psychosomatic Rehabilitation: Effects of Pre-Treatment Counselling under the Statutory Pension Insurance Scheme]. *Rehabilitation*, *48*(5), 283–287. http://doi.org/10.1055/s-0029-1239544

Bhugra, D. (2004). Migration and mental health. *Acta Psychiatrica Scandinavica*, *109*(4), 243–258. Retrieved from http://onlinelibrary.wiley.com/doi/10.1046/j.0001-690X.2003.00246.x/full

Bischoff, C., Gönner, S., Ehrhardt, M., & Limbacher, K. (2005). [Outpatient preparation and aftercare to improve the effects of psychosomatic inpatient rehabilitation]. *Verhaltenstherapie*, *15*(2), 78–87.

Boeschoten, R. E., Nieuwenhuis, M. M., van Oppen, P., Uitdehaag, B. M. J., Polman, C. H., Collette, E. H., … Dekker, J. (2012). Feasibility and outcome of a web-based self-help intervention for depressive symptoms in patients with multiple sclerosis: a pilot study. *Journal of the Neurological Sciences*, *315*(1-2), 104–9. http://doi.org/10.1016/j.jns.2011.11.016

Bowling, A. (1994). Beliefs about illness causation among Turkish and white British people living in a deprived inner London district. *Health Education Research*, *9*(3), 355–364. http://doi.org/10.1093/her/9.3.355

Brislin, R. W., Lonner, W. J., & Throndike, R. M. (1973). *Cross cultural research methods.* New York: John Wiley & Sons.

Broadbent, E., Petrie, K. J., Main, J., & Weinman, J. (2006). The brief illness perception questionnaire. *Journal of Psychosomatic Research*, *60*(6), 631–637. http://doi.org/10.1016/j.jpsychores.2005.10.020

Butler, A. C., Chapman, J. E., Forman, E. M., & Beck, A. T. (2006). The empirical status of cognitive-behavioral therapy: a review of meta-analyses. *Clinical Psychology Review*, *26*(1), 17–31. http://doi.org/10.1016/j.cpr.2005.07.003

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences.* (2nd ed.). Hillsdale, NJ: Erlbaum.

Çorapçıoğlu, A., & Özer, G. U. (n.d.). [Patient Health Questionnaire-9]. Retrieved December 12, 2012, from http://www.phqscreeners.com/pdfs/02_PHQ-9/PHQ9_Turkish for Turkey.pdf

Davidson, T. M., Yuen, E. K., Felton, J. W., McCauley, J., Gros, K. S., & Ruggiero, K. J. (2014). Feasibility assessment of a brief, web-based behavioral activation intervention for adolescents with depressed mood. *International Journal of Psychiatry in Medicine*, *48*(1), 69–82. http://doi.org/http://dx.doi.org/10.2190/PM.48.1.f

De Wit, M. A. S., Tuinebreijer, W. C., Dekker, J., Beekman, A. J. T. F., Gorissen, W. H. M., Schrier, A. C., … Verhoeff, A. P. (2008). Depressive and anxiety disorders in different ethnic groups: a population based study among native Dutch, and Turkish, Moroccan and Surinamese migrants in Amsterdam. *Social Psychiatry and Psychiatric Epidemiology*, *43*(11), 905–912. http://doi.org/10.1007/s00127-008-0382-5

Drieschner, K. H., Lammers, S. M. M., & van der Staak, C. P. F. (2004). Treatment motivation: An attempt for clarification of an ambiguous concept. *Clinical Psychology Review*, *23*(8), 1115–1137. http://doi.org/10.1016/j.cpr.2003.09.003

Ebert, D. D., Hannig, W., Tarnowski, T., Sieland, B., Götzky, B., & Berking, M. (2013). [Web-based rehabilitation aftercare following inpatient psychosomatic treatment]. *Die Rehabilitation*, *52*, 164–172. http://doi.org/10.1055/s-0033-1345191

Eskin, M. (1989). Rural population's opinions about the causes of mental illness, modern psychiatric help-sources and traditional healers in Turkey. *International Journal of Social Psychiatry*, *35*(4), 324–328. http://doi.org/10.1177/002076408903500404

Eurostat. (2011). *Migrants in Europe: A statistical portrait of the first and second generation*. Luxembourg: European Union. http://doi.org/10.2785/5318

Faul, F. (1992). G*Power Version 3.1.5. Kiel, Germany.

Fliege, H., Rose, M., Bronner, E., & Klapp, B. F. (2002). Predicting Long-Term Outcome of In-Patient Psychosomatic Treatment. *Psychotherapie Psychosomatik Medizinische Psychologie*, *52*(2), 47–55. http://doi.org/10.1055/s-2002-20184

Frank, J. D., & Frank, J. B. (1993). *Persuasion and healing*. Baltimore, MD: Johns Hopkins University Press.

Franz, M., Lujic, C., Koch, E., Wüsten, B., Yürük, N., & Gallhofer, B. (2007). [Subjective illness beliefs of Turkish migrants with mental disorders - specific characteristics compared to German patients]. *Psychiatrische Praxis*, *34*, 332–338. http://doi.org/10.1055/s

Gaab, J., & Ehlert, U. (2005). *Chronische Erschöpfung und chronisches Erschöpfungssyndrom*. Göttingen: Hogrefe.

German Federal Statistical Office. (2014). *[Population and employment. Population with migration background - results of the microcensus 2013]*. Wiesbaden: Statistisches Bundesamt.

Giese, A., Uyar, M., Uslucan, H. H., Becker, S., & Henning, B. F. (2013). How do hospitalised patients with Turkish migration background estimate their language skills and their comprehension of medical information - a prospective cross-sectional study and comparison to native patients in Germany to assess the language barrier . *BMC Health Services Research*, *13*, 196. http://doi.org/10.1186/1472-6963-13-196

Göbber, J., Pfeiffer, W., Winkler, M., Kobelt, A., & Petermann, F. (2010). [Inpatient health care treatment for patients of Turkish descent - special challenges and treatment results]. *Zeitschrift Für Psychiatrie, Psychologie Und Psychotherapie*, *58*(3), 181–187. http://doi.org/10.1024/1661-4747/a000026

González, H. M., Tarraf, W., Whitfield, K. E., Vega, W. W. a, & González, H. M. H. (2010). The epidemiology of major depression and ethnicity in the United States. *Journal of Psychiatric Research*, *44*(15), 1043–1051. http://doi.org/10.1016/j.jpsychires.2010.03.017

Gräfe, K., Zipfel, S., Herzog, W., & Löwe, B. (2004). [Screening for psychiatric disorders with the Patient Health Questionnaire (PHQ). Results from the German validation study]. *Diagnostica*, *50*(4), 171–181. http://doi.org/10.1026/0012-1924.50.4.171

Hagger, M. S., & Orbell, S. (2003). A Meta-Analytic Review of the Common-Sense Model of Illness Representations. *Psychology & Health*, *18*(2), 141–184. http://doi.org/10.1080/0887044031000813 21

Henkel, V., Mergl, R., Kohnen, R., Allgaier, A.-K., Möller, H.-J., & Hegerl, U. (2004). Use of brief depression screening tools in primary care: consideration of heterogeneity in performance in different patient groups. *General Hospital Psychiatry*, *26*(3), 190–8. http://doi.org/10.1016/j.genhosppsych.2004.02.003

Henkel, V., Mergl, R., Kohnen, R., Maier, W., Möller, H. J., & Hegerl, U. (2003). Identifying depression in primary care: a comparison of different methods in a prospective cohort study. *BMJ*, *326*, 200–201.

Hettema, J., Steele, J., & Miller, W. R. (2005). Motivational interviewing. *Annual Review of Clinical Psychology*, *1*, 91–111. http://doi.org/10.1146/annurev.clinpsy.1.102803.143833

Hinton, D. E., & Jalal, B. (2014). Parameters for Creating Culturally Sensitive CBT: Implementing CBT in Global Settings. *Cognitive and Behavioral Practice*, *21*(2), 139–144. http://doi.org/10.1016/j.cbpra.2014.01.009

Hwang, W.-C. (2011). Cultural Adaptations: A Complex Interplay between Clinical and Cultural Issues. *Clinical Psychology : A Publication of the Division of Clinical Psychology of the American Psychological Association*, *18*(3), 238–241. http://doi.org/10.1111/j.1468-2850.2011.01255.x

Jerusalem, M., Schwarzer, R., & Swe, A. S. (1999). *Skala zur Allgemeinen Selbstwirksamkeitserwartung*.

Kizilhan, J. (2008). [Interaction of illness perception and coping with Turkish patients - a comparative study]. *Verhaltenstherapie & Verhaltenstherapie*, *29*(4), 352–366.

Kroenke, K., Spitzer, R. L., DeGruy, F. V, & Swindle, R. (1998). A symptom checklist to screen for somatoform disorders in primary care. *Psychosomatics*, *39*(3), 263–272. http://doi.org/10.1016/S0033-3182(98)71343-X

Kroenke, K., Spitzer, R. L., & Williams, J. B. (2001). The PHQ-9: validity of a brief depression severity measure. *Journal of General Internal Medicine*, *16*(9), 606–13.

Kroenke, K., Spitzer, R. L., & Williams, J. B. W. (2002). The PHQ-15: validity of a new measure for evaluating the severity of somatic symptoms. *Psychosomatic Medicine*, *64*(2), 258–266.

Kroenke, K., Spitzer, R., Williams, J., & Löwe, B. (2010). The Patient Health Questionnaire somatic, anxiety, and depressive symptom scales: a systematic review. *Psychiatry and Primary Care*, *32*(4), 345–359.

Latanzio-Bunschoten, S. (2003). Psychometrische Evaluation des Illness Perception Questionnaire (IPQ-R) im deutsch-sprachigen Raum. Zürich: Universität Zürich.

Lohaus, A., & Schmitt, G. M. (1989). *[Locus of Control Inventory for Illness and Health]*. Göttingen: Hogrefe.

Löwe, B., Decker, O., & Müller, S. (2008). Validation and standardization of the Generalized Anxiety Disorder Screener (GAD-7) in the general population. *Medical Care*, *46*(3), 266–274.

Löwe, B., Gräfe, K., Zipfel, S., Witte, S., Loerch, B., & Herzog, W. (2004). Diagnosing ICD-10 depressive episodes: superior criterion validity of the Patient Health Questionnaire. *Psychotherapy and Psychosomatics*, *73*(6), 386–90. http://doi.org/10.1159/000080393

Löwe, B., Kroenke, K., Herzog, W., & Gräfe, K. (2004). Measuring depression outcome with a brief self-report instrument: sensitivity to change of the Patient Health Questionnaire (PHQ-9). *Journal of Affective Disorders*, *81*(1), 61–6. http://doi.org/10.1016/S0165-0327(03)00198-8

Löwe, B., Spitzer, R., Gräfe, K., Kroenke, K., Quenter, A., Zipfel, S., … Herzog, W. (2004). Comparative validity of three screening questionnaires for DSM-IV depressive disorders and physicians' diagnoses. *Journal of Affective Disorders*, *78*(2), 131–140. http://doi.org/10.1016/S0165-0327(02)00237-9

Löwe, B., Spitzer, R. L., Zipfel, S., & Herzog, W. (2002). *[PRIME MD Patient Health Questionnaire (PHQ) — German version Manual and materials: 2nd edition]*. Karlsruhe, Germany: Pfizer.

Lundahl, B. W., Kunz, C., Brownell, C., Tollefson, D., & Burke, B. L. (2010). A Meta-Analysis of Motivational Interviewing: Twenty-Five Years of Empirical Studies. *Research on Social Work Practice*, *20*(2), 137–160. http://doi.org/10.1177/1049731509347850

Luszczynska, A., Gutiérrez-Doña, B., & Schwarzer, R. (2005). General self-efficacy in various domains of human functioning: Evidence from five countries. *International Journal of Psychology*, *40*(2), 80–89. http://doi.org/10.1080/00207590444000041

Luszczynska, A., Scholz, U., & Schwarzer, R. (2005). The general self-efficacy scale: multicultural validation studies. *The Journal of Psychology*, *139*(5), 439–457. http://doi.org/10.3200/JRLP.139.5.439-457

Martin, A., Rief, W., Klaiberg, A., & Braehler, E. (2006). Validity of the Brief Patient Health Questionnaire Mood Scale (PHQ-9) in the general population. *General Hospital Psychiatry*, *28*(1), 71–7. http://doi.org/10.1016/j.genhosppsych.2005.07.003

Melfi, C. A., Croghan, T. W., Hanna, M. P., & Robinson, R. L. (2000). Racial Variation in Antidepressant Treatment in a Medicaid Population. *Journal of Clinical Psychiatry*, *61*, 16–21.

Miller, W., & Rollnick, S. (1991). *Motivational interviewing: Preparing people to change addictive behavior*. New York: The Guildford Press.

Minas, H., Klimidis, S., & Tuncer, C. (2007). Illness causal beliefs in Turkish immigrants. *BMC Psychiatry*. http://doi.org/10.1186/1471-244X-7-34

Mösko, M., Schneider, J., Koch, U., & Schulz, H. (2008). [Does a Turkish migration background influence treatment outcome? Results of a prospective inpatient healthcare study]. *Psychother Psych Med*, *58*, 176–182.

Moss-Morris, R., Weinman, J., Petrie, K., Horne, R., Cameron, L., & Buick, D. (2002). The Revised Illness Perception Questionnaire (IPQ-R). *Psychology and Health*, *17*(1), 1–16. http://doi.org/10.1080/08870440290001494

Oflaz, S. B. (n.d.). Kısa hastalık algı ölçeği. Retrieved December 12, 2012, from http://www.uib.no/ipq/

Osilla, K. C., D'Amico, E. J., Díaz-Fuentes, C. M., Lara, M., & Watkins, K. E. (2012). Multicultural web-based motivational interviewing for clients with a first-time DUI offense. *Cultural Diversity & Ethnic Minority Psychology*, *18*(2), 192–202. http://doi.org/10.1037/a0027751

Petrie, K. J., Perry, K., Broadbent, E., & Weinman, J. (2012). A text message programme designed to modify patients' illness and treatment beliefs improves self-reported adherence to asthma preventer medication. *British Journal of Health Psychology*, *17*(1), 74–84. http://doi.org/10.1111/j.2044-8287.2011.02033.x

Petrie, K. J., & Weinman, J. (2012). Patients' Perceptions of Their Illness: The Dynamo of Volition in Health Care. *Current Directions in Psychological Science*, *21*(1), 60–65. http://doi.org/10.1177/0963721411429456

Pfizer Inc. (2013). Patient Health Questionnaires (PHQ) Screeners, official website. Retrieved from http://www.phqscreeners.com/overview.aspx?Screener=02_PHQ-9

Poole, R., Simpson, S. a, & Smith, D. J. (2012). Internet-based psychoeducation for bipolar disorder: a qualitative analysis of feasibility, acceptability and impact. *BMC Psychiatry*, *12*(1), 139. http://doi.org/10.1186/1471-244X-12-139

Priebe, S., Sandhu, S., Dias, S., Gaddini, A., Greacen, T., Ioannidis, E., … Bogic, M. (2011). Good practice in health care for migrants: views and experiences of care professionals in 16 European countries. *BMC Public Health*, *11*(1), 187. http://doi.org/10.1186/1471-2458-11-187

Raleigh, V. S., Irons, R., Hawe, E., Scobie, S., Cook, A., Reeves, R., … Harrison, J. (2007). Ethnic variations in the experiences of mental health service users in England: results of a national patient survey programme. *The British Journal of Psychiatry : The Journal of Mental Science*, *191*, 304–12. http://doi.org/10.1192/bjp.bp.106.032417

Rebello, T. J., Marques, A., Gureje, O., & Pike, K. M. (2014). Innovative strategies for closing the mental health treatment gap globally. *Current Opinion in Psychiatry*, *27*(4), 308–14. http://doi.org/10.1097/YCO.0000000000000068

Reich, H., Bockel, L., & Mewes, R. (2015). Motivation for psychotherapy and illness beliefs in Turkish immigrant inpatients in Germany: Results of a cultural comparison study. *Journal of Racial and Ethnic Health Disparities*, *2*(1), 112–123. http://doi.org/10.1007/s40615-014-0054-y

Reich, H., Rief, W., Brähler, E., & Mewes, R. (submitted). Cross-cultural validation of the German and Turkish versions of the PHQ-9: An IRT approach.

Resnicow, K., Braithwaite, R., Ahluwalia, J., & Baranowski, T. (1999). Cultural sensitiviy in public health: defined and demystified. *Ethnicity and Disease*, *9*, 10–21.

Rief, W. (n.d.). Fragebogen zur Krankheitswahrnehmung (Kurzform). Retrieved December 12, 2012, from http://www.uib.no/ipq/

Rollnick, S., Miller, W. R., & Butler, C. C. (2008). *Motivational Interviewing in Health Care: Helping patients change behavior.* New York, NY: The Guilford Press.

Rubak, S., Sandbæk, A., Lauritzden, T., & Christensen, B. (2005). Motivational interviewing: a systematic review and meta-analysis. *British Journal of General Practice*, *55*, 305–312.

Sariaslan, S., Morawa, E., & Erim, Y. (2014). [Mental distress in primary care patients: German patients compared with patients of Turkish origin]. *Der Nervenarzt*, *85*(5), 589–95. http://doi.org/10.1007/s00115-013-3767-y

Scharloo, M., Kaptein, A. A., Weinman, J., Hazes, J. M., Willems, L. N. A., Bergman, W., & Rooijmans, H. G. M. (1998). Illness perceptions, coping and functioning in patients with rheumatoid arthritis, chronic obstructive pulmonary disease and psoriasis. *Journal of Psychosomatic Research*, *44*(5), 573–585.

Schenk, L., Bau, a-M., Borde, T., Butler, J., Lampert, T., Neuhauser, H., … Weilandt, C. (2006). [A basic set of indicators for mapping migrant status. Recommendations for epidemiological practice]. *Bundesgesundheitsblatt, Gesundheitsforschung, Gesundheitsschutz*, *49*(9), 853–60. http://doi.org/10.1007/s00103-006-0018-4

Schmeling-Kludas, C., Fröschlin, R., & Boll-Klatt, A. (2003). Inpatient Psychosomatic Rehabilitation for Turkish Migrants: What can be realized, what are the effects? *Rehabilitation*, *42*(6), 363–370. http://doi.org/10.1055/s-2003-45460

Scholz, U., Doña, B. G., Sud, S., & Schwarzer, R. (2002). Is general self-efficacy a universal construct? Psychometric findings from 25 countries. *European Journal of Psychological Assessment*, *18*(3), 242–251. http://doi.org/10.1027//1015-5759.18.3.242

Schwarzer, R., & Jerusalem, M. (1995). Generalized self-efficacy scale. *Measures in Health Psychology: A User's Portfolio. Causal and Control Beliefs*, *1*, 35–37.

Spitzer, R., Kroenke, K., & Williams, J. (1999). Validation and utility of a self-report version of PRIME- MD: The PHQ Primary Care Study. *JAMA*, *282*(18), 1737–1744.

Spitzer, R., Kroenke, K., Williams, J. B. W., & Löwe, B. (2006). A brief measure for assessing generalized anxiety disorder: the GAD-7. *Archives of Internal Medicine*, *166*, 1092–1097.

Swartz, H. a., Zuckoff, A., Grote, N. K., Spielvogle, H. N., Bledsoe, S. E., Shear, M. K., & Frank, E. (2007). Engaging depressed patients in psychotherapy: Integrating techniques from motivational interviewing and ethnographic interviewing to improve treatment participation. *Professional Psychology: Research and Practice*, *38*(4), 430–439. http://doi.org/10.1037/0735-7028.38.4.430

Swift, J. K., & Greenberg, R. P. (2012). Premature discontinuation in adult psychotherapy: a meta-analysis. *Journal of Consulting and Clinical Psychology*, *80*(4), 547–59. http://doi.org/10.1037/a0028226

Todd, N. J., Jones, S. H., Hart, A., & Lobban, F. a. (2014). A web-based self-management intervention for Bipolar Disorder "Living with Bipolar": A feasibility randomised controlled trial. *Journal of Affective Disorders*, *169*, 21–29. http://doi.org/10.1016/j.jad.2014.07.027

Tuncer, C. (1995). Mental illness in an Islamic-Mediterranean culture: Turkey. In I. Al-Issa (Ed.), *Handbook of culture and mental illness: An international perspective.* (pp. 169–182). Madison, CT: International Universities Press.

Wampold, B. E. (2007). Psychotherapy: "The" humanistic (and effective) treatment. *American Psychologist*, *62*(8), 857–873. http://doi.org/10.1037/0003-066X.62.8.857

Webber, K. H., Tate, D. F., & Quintiliani, L. M. (2008). Motivational interviewing in internet groups: a pilot study for weight loss. *Journal of the American Dietetic Association*, *108*(6), 1029–32. http://doi.org/10.1016/j.jada.2008.03.005

Weinman, J., Petrie, K. J., Moss-Morris, R., Broadbent, E., & Sivertsen, B. (n.d.). The Illness Perception Questionnaire. Retrieved December 12, 2012, from http://www.uib.no/ipq/

Westby, C. (1990). Ethnographic interviewing: Asking the right questions to the right people in the right ways. *Journal of Childhood Communication Disorders*, *13*(1), 101–111.

Wittkampf, K., Naeije, L., Schene, A., Huyser, J., & van Weert, H. (2007). Diagnostic accuracy of the mood module of the Patient Health Questionnaire: a systematic review. *Psychiatry and Primary Care*, *29*(5), 388–395.

Woellert, F., Kröhnert, S., Sippel, L., & Klingholz, R. (2009). *Ungenutzte Potenziale: Zur Lage der Integration in Deutschland.* Berlin-Institut für Bevölkerung und Entwicklung. http://doi.org/10.1007/978-3-531-19010-5_8

Yazici Güleç, M., Güleç, H., Simşek, G., Turhan, M., & Aydin Sünbül, E. (2012). Psychometric properties of the Turkish version of the Patient Health Questionnaire-Somatic, Anxiety, and Depressive Symptoms. *Comprehensive Psychiatry*, *53*(5), 623–9. http://doi.org/10.1016/j.comppsych.2011.08.002

Yeşilay, A., Schwarzer, R., & Jerusalem, M. (n.d.). Turkish Adaptation of the General Perceived Self-Efficacy Scale. Genelleştirilmiş özyetki beklentisi. Retrieved December 12, 2012, from http://userpage.fu-berlin.de/~health/turk.htm

Zane, N., Enomoto, K., & Chun, C. (1994). Treatment outcomes of Asian- and White-American clients in outpatient therapy. *Journal of Community Psychology*, *22*, 177–191.

Engaging Turkish immigrants in psychotherapy

Table 1

Overview of the engagement intervention "Sağlığa Doğru"

Topic of the section	Aims	Central message	Culture-tailored web-MI adaptations
1. My story	Reflect upon symptoms and their social consequences; learn that therapist is validating and interested in individual story	Your personal view of your illness counts, each disease history is different.	- Turkish sample patient and therapist talk about symptoms and social consequences in a video. Therapist behaves in a validating and encouraging manner. - Patient is asked about his/her most impairing symptom and to check areas of life in which he/she is impaired. Written feedback corresponding to the chosen areas is provided. - Patient is asked to write down his/her "good reason" for therapy ("What do you want to do again after treatment?"). Examples and hints are given.
2. Treatment – what do I already know?	Reflect upon previous treatment experiences and draw conclusions for your actual treatment	You can shape your therapy – say what you like and what you don't like!	- Previous treatment experiences are queried in adapted stages. - Questions about personal do's and don'ts for the actual treatment based on prior experiences (personal, hearsay, positive or negative nature of experience, personal opinion about psychotherapy). - Invitation to express a wish for the treatment. Examples are given; patient is encouraged to tell his/her practitioner about his/her wish.
3. Psychotherapy can help	Learn about the efficiency and effectiveness of psychotherapy; see how a psychological model can	Psychotherapy is an efficient and effective treatment for your disease.	- Written and graphic material about process and effectiveness of psychotherapy. - Video sequence in which the sample patient and the therapist develop a rationale for psychotherapeutic treatment and integrate

	integrate mixed causal illness attributions		mixed causal illness attributions (genetic predisposition, family stress, punishment from God, problems dealing with emotions) into a working model for psychotherapeutic interventions. - Rating of the personal relevance of causal illness attributions addressed in the video sequence.
4. Possible obstacles	Clarify and handle (expected) treatment difficulties	It is normal to have concerns about treatment – talk about them!	- Rating of the importance of different practical problems associated with treatment (e.g. unfamiliar food, difficulties to comply with religious requirements in the inpatient setting). - Video in which the sample therapist asks about the sample patient's concerns regarding treatment. - Rating of the importance of psychological and cultural problems associated with psychotherapy. - Feedback acknowledging the concerns and stimulating courage to talk about them.
5. Next steps	Commit to engage in treatment and work for individual goals	You can influence the achievement of your goals and improve your health and life.	- Open-ended questions about individual goals and actions planned. - Examples from the sample patient.

Engaging Turkish immigrants in psychotherapy

Table 2

Study sample characteristics

	Experimental group (*N* = 14)	Control group (*N* = 12)	Total (*n* = 26)	Test statistic[d]
Socio-demographic characteristics				
Age in years, *mean (SD)*	47.8 (5.5)	48.6 (7.3)	48.2 (6.3)	t (24) = -0.3
Female sex, *n (%)*	7 (50)	6 (50)	13 (50)	X^2 (1) = 0.0
Education in years, *mean (SD)*	7.7 (3.6)	6.8 (2.7)	7.3 (3.2)	t (24) = 0.7
Being employed, *n (%)*[a]	10 (71.4)	6 (50)	16 (61.5)	X^2 (1) = 1.3
Migration-related characteristics				
Years since immigration, *mean (SD)*[b]	28.1 (7.4)	30.1 (9.6)	29.2 (8.3)	t (22) = -0.8
German language proficiency, *mean (SD)*[c]	3.4 (0.8)	3.1 (0.9)	3.3 (0.8)	t (24) = 1.1
Clinical characteristics (categorical)				
Depressive disorder, *n (%)*	11 (78.6)	9 (75.0)	20 (76.9)	X^2 (1) = 0.0
Somatoform disorder, *n (%)*	2 (14.3)	2 (16.7)	4 (15.4)	X^2 (1) = 0.0
Stress or adjustment disorder, *n (%)*	1 (7.1)	1 (8.3)	2 (7.7)	X^2 (1) = 0.0
Comorbid disorders, *n (%)*	8 (57.1)	10 (83.3)	18 (69.2)	X^2 (1) = 2.1
Clinical characteristics (dimensional)				
PHQ-9 sum score, *mean (SD)*	19.1 (4.4)	16.0 (4.0)	17.7 (4.4)	t (24) = 1.9
PHQ-15 sum score, *mean (SD)*	18.2 (3.9)	17.8 (4.8)	18.0 (4.3)	t (24) = 0.3
GAD-7 sum score, *mean (SD)*	18.0 (3.8)	17.7 (3.3)	17.9 (3.5)	t (24) = 0.2

[a]Working part-time or full-time. [b]*N*=2 participants in the active control group were born in Germany and are not included here. [c]Self-reported German language proficiency (1= very good, 5 = none). [d]No test statistic was significant, i.e. there were no meaningful differences between study groups.

30

Engaging Turkish immigrants in psychotherapy

Table 3

Acceptance and feasibility of the interventions

	Engagement intervention[c]	Active control[d]	Test statistic	*p*
Overall rating	8.4 (1.6)	5.3 (2.5)	$t(23) = 3.7$	.001
'Are you motivated to engage in therapy?'	8.7 (1.7)	8.1 (2.5)	$t(23) = 0.7$	n.s.
'After using the tool, do you feel better prepared for therapy?'	7.0 (2.6)	3.6 (3.1)	$t(22) = 2.9$	.008
'Would you recommend this tool to other patients?'	7.9 (2.1)	7.2 (2.8)	$t(24) = 0.8$	n.s.
Use of the intervention without assistance[a]	7 (50)	5 (45.5)	$X^2(1) = 0.1$	n.s.
'Was the tool easy to handle?'[b]	9.4 (1.1)	8.0 (2.7)	$F(1) = 1.6$	n.s.
Time working with the intervention *(minutes)*	49.6 (6.9)	31.7 (6.8)	$t(24) = 6.6$	<.001

Note. Unless otherwise indicated, mean (SD) are presented. Rating scales ranged from 0 'no, not at all' to 10 'yes, absolutely'.
[a]*N* (%) using the tool without assistance. [b]Only participants that used the intervention without assistance. [c]*N* = 14. [d]*N* = 12.

Table 4

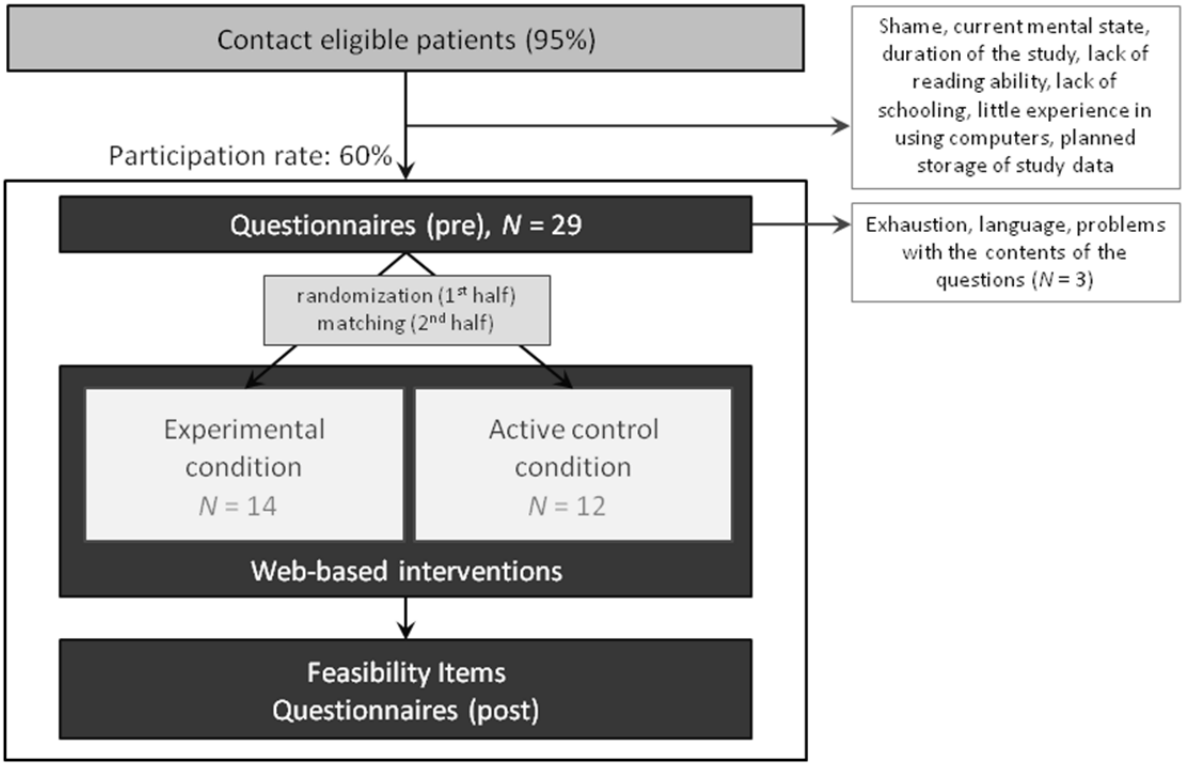
Usefulness of the engagement intervention regarding treatment-related variables

	Engagement intervention[a]		Active control[b]				
	Pre	Post	Pre	Post	Test statistic[c]	p^c	g^c
Illness concept (Brief-IPQ)[d]	60.3 (6.0)	57.0 (7.5)	58.7 (8.5)	58.6 (7.6)	t (13) = 1.62	.065	0.43
Personal control (IPQ-R)[d]	17.4 (3.9)	18.8 (4.1)	17.3 (2.1)	16.7 (3.9)	t (13) = 1.28	.111	0.34
Treatment control (IPQ-R)[d]	15.8 (5.1)	16.7 (4.9)	14.7 (2.8)	14.9 (3.6)	t (13) = 0.74	.237	0.20
External-fatalistic control (KKG)[e]	16.8 (6.4)	15.0 (6.9)	17.0 (6.3)	18.8 (7.1)	t (13) = 2.25	.021	0.60
Self-efficacy (SWE)[e]	17.4 (6.4)	19.9 (8.2)	15.7 (4.1)	14.6 (3.8)	t (13) = 2.18	.024	0.58

Note. Unless otherwise indicated, mean (SD) are presented.
[a]N = 14. [b]N = 12. [c]Results for contrast analyses for dependent samples (pre-post, EG only). [d]Statistical power is .20 to .40. [e]Statistical power is approximately .70.

Engaging Turkish immigrants in psychotherapy

Figure 1: Study design and flow chart



8 CURRICULUM VITAE UND PUBLIKATIONEN

8.1 CURRICULUM VITAE

-- DER LEBENSLAUF IST NICHT TEIL DER VERÖFFENTLICHUNG --

8.2 PUBLIKATIONSLISTE

Peer-reviewed Journals

Reich, H., Rief, W., Brähler, E., & Mewes, R. (submitted). Cross-cultural validation of the German and Turkish versions of the PHQ-9: An IRT approach

Reich, H., Zürn, D., & Mewes, R. (submitted). Engaging Turkish immigrants in psychotherapy: Development and pilot RCT of a culture-tailored, web-based intervention.

Reich, H., Bockel, L., Mewes, R. (2015). Motivation for Psychotherapy and Illness Beliefs in Turkish Immigrant Inpatients in Germany: Results of a Cultural Comparison Study. Journal of Racial and Ethnic Health Disparities, 2 (1), 112-123. DOI 10.1007/s40615-014-0054-y

Peer-reviewed Abstracts

Reich, H., Rief, W., & Mewes, R. (2015). How illness-beliefs may influence help-seeking in traumatized asylum seekers. 73rd Annual Scientific Meeting of the American Psychosomatic Society, Savannah, GA, USA.

Reich, H., & Mewes, R. (2015). Enhancing the motivation for psychotherapy in inpatients with a Turkish migration background. 5th Congress on Transcultural Psychosomatics, Psychiatry and Psychotherapy, Marburg, Deutschland.

Shahhosseini, N., Reich, H., & Mewes, R. (2015). Einflussfaktoren auf die depressive Symptomatik bei Asylsuchenden in Hessen. 5th Congress on Transcultural Psychosomatics, Psychiatry and Psychotherapy, Marburg, Deutschland.

Modalal, M., Seele, F., Skoluda, N., Reich, H., Nater, U., & Mewes, R. (2015). Hair cortisol concentration (HCC) among asylum seekers living in Hessen and its correlation with traumatization and posttraumatic stress disorder (PTSD). 5th Congress on Transcultural Psychosomatics, Psychiatry and Psychotherapy, Marburg, Deutschland.

Mewes, R., Laskawi, J., Asbrock, F., & Reich, H. (2014). The influence of racial discrimination on health in two ethnic minority groups in Germany. In S. Sanderman, M. Hagedoorn, Wenckebach Instituut (Hrsg.), Innovation in Behavioral Medicine. Program book of the 13th International Congress of Behavioral Medicine. Groningen, Niederlande.

Reich, H., Zürn, D., Demir, S., & Mewes, R. (2014). Kultursensible psychoedukative Angebote für Menschen mit Migrationshintergrund: Durchführbarkeit und Akzeptanz. In T. Zimmermann, N. Heinrichs, K. Hahlweg (Hrsg.), Tradition und Aufbruch. Abstractband des 32. Symposium der DGPs Fachgruppe Klinische Psychologie und Psychotherapie (S. 81). Braunschweig, Deutschland.

Reich, H., Rief, W., & Mewes, R. (2013). Culture-Specific Illness-Beliefs and Motivation for Psychotherapy in Migrant Inpatients: Use it or Loose it. In K. Dobson (Hrsg): World Congress of Behavioral and Cognitive Therapies 2013: Abstract Book (S. 622). Lima, Peru.

Reich H., Mewes R. (2013). Vergleich der Depressivität türkischer Migranten und Deutscher: Messäquivalenz- und IRT-Analysen zum PHQ-9. In W. Lutz, K. Bergmann-Warnecke (Hrsg.): Forschung und Praxis im Dialog: Moderne Fortsetzungen eines alten Austauschs. Abstractband des 8. Workshopkongress und 31. Symposium der DGPs Fachgruppe Klinische Psychologie und Psychotherapie (S. 122). Trier, Deutschland. ISSN 1619-3970

Reich H., Bockel L., Mewes R. (2012). Einfluss von Akkulturation auf Krankheitskonzept und Therapiemotivation – eine Pilotstudie an türkischen Migranten in psychiatrischer Behandlung. In C. Vögele (Hrsg.): The mind-body connection. Abstractband des 30. Symposium Klinische Psychologie und Psychotherapie der DGPs Fachgruppe Klinische Psychologie und Psychotherapie (S. 101). Luxemburg, Luxemburg. ISBN 978-2-87971-820-0

Reich, H., Bedenk, B. T., Wöhr, M., & Schwarting, R. K. W. (2009). Two loudspeakters and a rat – an ultrasonic dialogue. 7th Meeting of the German Neuroscience Society, Göttingen, Deutschland.

Bedenk, B. T., Reich, H., Sadananda, M., Wöhr, M., & Schwarting R. K. W. (2008). 50-kHz calls from a listening rat's perspective – a social theory. 34th Congress of the German Psychological Society (Biological Psychology and Neuropsychology Section), Magdeburg, Deutschland.

9 EIDESSTATTLICHE ERKLÄRUNG

Ich versichere, dass ich meine Dissertation mit dem Titel

TRANSKULTURELLE ASPEKTE DER PSYCHOTHERAPIE: PSYCHOTHERAPIEMOTIVATION UND DIE ERFASSUNG VON DEPRESSIVITÄT BEI PATIENTEN MIT MIGRATIONSHINTERGRUND

selbstständig, ohne unerlaubte Hilfe angefertigt und mich dabei keiner anderen als der von mir ausdrücklich bezeichneten Quellen und Hilfen bedient habe.

Die Dissertation wurde in der jetzigen oder einer ähnlichen Form noch bei keiner anderen Hochschule eingereicht und hat bisher keinen sonstigen Prüfungszwecken gedient.

Marburg, 15. Dezember 2015

_____

Hanna Reich de Paredes